

UNITED STATES DISTRICT COURT

FOR THE WESTERN DISTRICT OF WISCONSIN

* * * * *

GERALD BUSHMAKER,

Plaintiff,

-vs-

Case No. 09-CV-726-SLC

RAPID-AMERICAN CORPORATION,

Madison, Wisconsin

March 7, 2013

Defendant.

8:35 a.m.

* * * * *

STENOGRAPHIC TRANSCRIPT OF THIRD DAY OF JURY TRIAL
HELD BEFORE MAGISTRATE STEPHEN L. CROCKER, and a jury,

APPEARANCES:

For the Plaintiff: Cascino Vaughan Law Firm
BY: ROBERT MCCOY
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JAMES HOEY
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For the Defendant: Rasmussen Willis Dickey & Moore
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BY: MARK FELDMANN
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Also present: Donna Benson - paralegal

Lynette Swenson, RMR, CRR, CBC
Federal Court Reporter
U.S. District Court 120 N. Henry St., Rm. 520
Madison, WI 53703 (608) 255-3821

I-N-D-E-X

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(Call to order)

THE CLERK: Case Number 09-CV-726-SLC.

Bushmaker v. Rapid-American Corporation is called for a conference and third day of jury trial. May we have the appearances, please.

MR. MCCOY: Yes. Robert McCoy and Kevin Hanbury for the plaintiffs.

THE COURT: Good morning.

MR. HANBURY: Good morning, Your Honor.

MR. MOORE: Steve Moore and Mark Feldmann for the defendant.

1 THE COURT: Good morning to you as well.

2 MR. FELDMANN: Morning, Judge.

3 THE COURT: All right, Counsel. I'll simply
4 acknowledge receipt of the proposed instruction on how
5 to handle the Arthur Mueller testimony that was provided
6 this morning by the defendant, and I've already taken
7 pen to it, but we'll deal with it at the appropriate
8 time. I don't have anything else on my agenda, but I
9 always call these meetings in abundance of caution.

10 Mr. McCoy, anything that the plaintiff wants to
11 bring to the Court's attention before the jury comes in
12 at nine?

13 MR. MCCOY: Judge, the two items I want to make
14 sure of were still the stipulation on Rapid's
15 liabilities, which I understand is supposed to be
16 resolved by the end of today.

17 THE COURT: Okay. Well, you're right. But I
18 guess I was expecting you guys to tell me if you had
19 talked, and if so, what the result of that discussion
20 was.

21 MR. MOORE: We'll work it out over the lunch
22 hour.

23 THE COURT: Okay. Yeah, and you're right,
24 Mr. McCoy, you're entitled to that before you rest. I'd
25 like it done before today. But if you can do it over

1 lunch, that's great.

2 MR. MCCOY: Okay.

3 THE COURT: That's one.

4 MR. MCCOY: Right. The other question I had
5 was we had some categories of medical bills that were --
6 the medical bill relationship issue was reserved in the
7 MDL order for future. It didn't have to be in any
8 expert report. So I think we've got a category of bills
9 that's been agreed upon, types of bills by categories,
10 and they have that. And my understanding is those
11 categories are agreed upon and the issue is whether
12 certain bills do really fit in those categories.

13 THE COURT: Okay.

14 MR. MCCOY: And that isn't a lot of money.

15 MR. MOORE: We're about a \$5,000 discrepancy,
16 Your Honor.

17 THE COURT: Well, give me --

18 MR. MCCOY: If that's all it is, I'm not going
19 to bother Dr. Frank putting on evidence of any of that
20 to the jury.

21 THE COURT: Sure. Well, give me an order of
22 magnitude. \$5,000 apart out of a number how big?

23 MR. MOORE: 107. 5,000 out of 107.

24 THE COURT: Okay. So about a 5 percent
25 difference.

1 MR. MOORE: Yes, sir.

2 THE COURT: Okay. Fair enough. Well, and tell
3 me what you want the Court to do. Are you just letting
4 me know that you've got this difference or is there
5 something I'm going to have to resolve?

6 MR. MCCOY: I'd just like confirmation that
7 it's not much different than \$5,000 in terms of what the
8 difference is.

9 THE COURT: Well, I think you just heard that.

10 MR. MCCOY: And if so, if that's confirmed,
11 then Dr. Frank, who is here today, I wouldn't need him
12 to express anything on the specific medical bills.

13 THE COURT: Sure. And I think Mr. Moore just
14 committed to that. But Mr. Moore, let's be more
15 proactive here. Are you --

16 MR. MOORE: I commit to that. My right hand is
17 raised for the record. I commit to that.

18 THE COURT: Okay. Fair enough. That's it then
19 preliminarily for the plaintiff.

20 Mr. Moore, any preliminary issues on behalf of the
21 defendant today?

22 MR. MOORE: I do, Your Honor. But before we
23 discuss it, I'd like Dr. Frank to leave the courtroom
24 because it concerns the scope of his testimony.

25 THE COURT: Sure. Doctor, if you'd just make

1 yourself comfortable out in the hallway, that would be
2 wonderful. Thank you.

3 DR. FRANK: Yes, Your Honor.

4 THE COURT: Thank you.

5 (Dr. Frank leaves courtroom at 8:39 a.m.)

6 THE COURT: All right. The doctor has left.

7 MR. MOORE: Thank you, Judge. I have a couple
8 of concerns. *Mea culpa* because I know you haven't grown
9 up in the litigation like Mr. McCoy and I have. In this
10 litigation, historically a lot of times a lot of
11 different experts are identified, and because Mr. McCoy
12 and I are brothers in the Illinois bar, we respect that
13 and try to accommodate each other. In this instance, I
14 think the Court is going to find that a lot of
15 Dr. Frank's testimony is cumulative of that which was
16 provided yesterday and will be provided later on today
17 in the form of Dr. Bedrossian's deposition. I just
18 bring that to the Court's attention. It is -- I didn't
19 make a motion in limine on it, but I have an objection
20 to it being cumulative. I didn't know until now. To be
21 honest with you --

22 THE COURT: No, no, I understand the concern in
23 general, but let's descend into specifics. Mr. McCoy,
24 we all know it's just a matter of good trial practice
25 and in terms of what judges prefer that cumulation is

1 frowned upon. How were you planning on handling that
2 with your witnesses hereafter? Were you planning on
3 skipping over the stuff that the jury has already heard
4 or were you going to revisit it all?

5 MR. MCCOY: I wasn't going to revisit in any
6 great detail, but I think that is a complex medical case
7 and one doctor alone can't answer all the questions,
8 especially because Arnold Brody is not a medical doctor.
9 He's not.

10 THE COURT: Sure.

11 MR. MCCOY: And second of all, Dr. Bedrossian
12 is a pathologist and Dr. Frank is a occupational
13 medicine specialist and his career in asbestos disease
14 goes back to 1968 and that has been the primary part of
15 his career. So he has information about asbestos
16 disease that certainly Dr. Brody did not convey or I
17 didn't ask him. I mean there's an indication that
18 Mr. Bushmaker has at least three separate conditions
19 we've identified: There's an issue about smoking
20 causing it; there's exposures; which exposures caused
21 it. Dr. Brody can't opine on causation. He's simply
22 not a medical doctor to do that.

23 So in all of these contexts, there's vast
24 differences in what they're going to be covering and --

25 THE COURT: Sure. And I --

1 MR. MCCOY: Certainly I'm aware of, you know,
2 repeating exactly what was said before, but I'm saying
3 these are three different views and they're not going to
4 be cumulative in the sense that I'm not going to have
5 him go up there and say, you know, how does an asbestos
6 fiber penetrate and all that stuff.

7 THE COURT: Right. I get it. And those are
8 valid points as well. And if we circle back to high
9 school Venn diagrams, it sounds like we've got three
10 witnesses who may have a little bit of overlap, and
11 perhaps all three will overlap in some small piece, but
12 to the extent that none of those circles overlap, it's
13 all fair game. And I'm trusting Mr. McCoy not to be too
14 repetitive with his witness, but certainly he's entitled
15 to adduce new evidence.

16 Mr. Moore, if you think that we're hearing too
17 much --

18 MR. MOORE: I can only say mucociliary
19 escalator so many times.

20 MR. MCCOY: I don't think -- I don't think
21 that's in here, Your Honor.

22 THE COURT: Well, sure. And if you want to
23 just object, cumulative, probably the result you'll get
24 is Mr. McCoy, let's move on as quickly as we can and
25 you'll acknowledge that and then we'll just keep going.

1 MR. MOORE: I'll keep an eye on the jury and
2 see if they're glossing over on the same testimony.

3 Secondly, and a greater concern is the scope of the
4 testimony. A report was prepared in this case. We have
5 a copy of it. I'm concerned that some issues about an
6 increased risk of cancer reappearing is going to come
7 in. That's a very technical area I will represent to
8 the Court. It's not contained in the report here today.
9 And I think it's prejudicial. I think it's speculative.
10 And --

11 THE COURT: Sure. Well, let me interrupt you
12 there to make clear what I think I made clear in one of
13 my rulings at the Final Pretrial Conference. There is
14 no sandbagging, even if it's unintentional. We, in this
15 court, are very strict about limiting experts to what's
16 in the reports. We don't even allow supplementation
17 under 26(e) beyond the scope of that which was contained
18 in the original report.

19 We see this a lot more in patent lawsuits than we
20 do in products liability lawsuits, but the rule is the
21 same and the ruling in this case will be the same. He
22 may not exceed his report on any substantive matter.
23 Period. End of story. And if he does, you can object
24 and I'll strike it.

25 MR. MOORE: Thank you, Judge.

1 THE COURT: And Mr. McCoy, I presume you
2 weren't going to go there, but I just wanted to be clear
3 that I don't want you asking about anything that's not
4 in his report. And if he starts to volunteer it, it
5 might behoove you to stop him so that you don't get an
6 objection that's sustained. But I'm not going to
7 micromanage and I'm not going to predict what might
8 happen.

9 Again, we don't look for trouble. We assume
10 everyone is going to do what they are supposed to do.

11 Mr. Moore, was that it for the defendant?

12 MR. MOORE: Yes, sir.

13 MR. MCCOY: I don't -- Judge, I would have to
14 talk to Dr. Frank on this, but we have his report that
15 he prepared --

16 THE COURT: Well --

17 MR. MCCOY: -- and he's -- he's got in his
18 report --

19 THE COURT: Let me put it to you --

20 MR. MCCOY: -- putting --

21 THE COURT: No, Mr. McCoy. Stop. Don't
22 interrupt me. I haven't read the reports. That's not
23 my job. But I've just heard a concern from Mr. Moore on
24 behalf of the defendant that there is a fear that he
25 will exceed the scope of his report in a material way.

1 Again, I don't expect that to happen and what you're
2 telling me now is that you expect him to stick to his
3 report. Okay. I accept that as well. But if there's
4 any doubt about that, then I would suggest that on the
5 matter that is in dispute this morning, you walk him
6 through the report even if you have to read it to him
7 rather than have him freelance. Okay?

8 Because I haven't read the reports. I don't know
9 what's in there. But if I get objections about this, we
10 may end up at side bar with the parties both pointing to
11 the report at that point and saying what's in, what's
12 not, and then I may have to make rulings on the fly
13 based on inferences or implications. I'd prefer not to
14 have to do that. But I'll do whatever I have to do.

15 So I'm just going to suggest that because it's been
16 raised as an issue, you make sure that your witness tows
17 the line as best as you can. But you're right, anything
18 that's in the report is fair game; but anything that is
19 substantively different from his report is not and I
20 don't know where that line is, but the rule is clear.

21 MR. MCCOY: Well, you know, he talks about all
22 exposures from any and all products contributing. I'm
23 going to ask him hypotheticals on products that are
24 going into evidence.

25 MR. MOORE: That's within the scope of the

1 report.

2 THE COURT: Sure. And again, I can't predict
3 and I'm not going to ask you to hypothesize to me before
4 he testifies what might happen. I'm just saying that
5 the rule is clear and the Court will enforce it if asked
6 to. I'm just saying it might end up being kind of messy
7 and disruptive to get there from here. So the closer
8 both sides can hue to the line, probably the clearer the
9 presentation will be to the jury.

10 I think that's all we can accomplish at this
11 juncture and let's just see what the testimony is. I
12 don't have anything else.

13 MR. MCCOY: I mean let me talk to Dr. Frank
14 about one section of this.

15 THE COURT: Yeah. Well, we've got 15 minutes,
16 unless the jury is all here. We can start early if
17 they're all here. But if not, we'll just start at nine.

18 MR. MCCOY: Let me talk to him right now on
19 this one section.

20 THE COURT: Okay. Well, unless the parties
21 have anything else for the Court, we'll adjourn and then
22 we'll just reassemble when all eight jurors are here and
23 we'll start at that point. Okay?

24 With that, we're done.

25 MR. MOORE: Thanks, Judge.

1 (Recess 8:48-9:00 a.m.)

2 THE COURT: Do we have a full jury?

3 MR. MCCOY: Just a minute, Judge. We're
4 resolving one issue.

5 THE COURT: All right. Everyone be seated.

6 MR. MCCOY: As I understand, we only bring a
7 witness in once. If there's a point that we know we
8 have to address, it's in the other report, then I think
9 that's what we would do now.

10 THE COURT: Okay. So are you addressing that
11 to the Court? I mean --

12 MR. MCCOY: Yes.

13 THE COURT: -- obviously in any trial the
14 plaintiff has the right to rebuttal. Again, we'd like
15 common sense to be our guide here, but if there's some
16 question as to whether the rebuttal will be necessary
17 and putting it in proactively offends the defendant's
18 sense of what's appropriate and admissible, then perhaps
19 it's best to wait until the defense case and then bring
20 the witness back.

21 On the other hand, you know, I'd like to finish the
22 evidence on Monday at the latest and have you guys close
23 not later than Tuesday, and hopefully Monday afternoon.
24 Does this have to do with this morning's witness --

25 MR. MCCOY: Yes.

1 THE COURT: -- with what's in his report?

2 MR. MCCOY: Specifically the issue is what I
3 think we know in asbestos is the five million particles
4 per cubic foot standard.

5 MR. MOORE: I talked about it in my opening
6 statement.

7 MR. MCCOY: Right.

8 MR. MOORE: But if he wants to say that was a
9 standard adopted in Wisconsin, I guess that's fine. I
10 mean that's fine.

11 THE COURT: Okay. I'm not looking for trouble
12 here.

13 MR. MOORE: You know, this is an incremental
14 issue. You know, how much far afield are we going to
15 get from what disclosures have been in this case.

16 THE COURT: Okay.

17 MR. MCCOY: It's not something I want, I'm just
18 -- it's just --

19 THE COURT: Sure. But let's --

20 MR. MCCOY: Is it possible to get Dr. Frank
21 past --

22 THE COURT: -- be clear. Let's be clear. And
23 I think we are, but let's revisit where I think we've
24 already been and it has not changed, at least not since
25 yesterday. The warning issue ends with the last sale;

1 all right? As the Court ruled before the trial began
2 and has reconfirmed, evidence of knowledge obtained
3 after the last sale in 1960 is relevant only for the
4 purpose of dangerousness, not for what Rapid knew. That
5 is the import of the new proposed instruction.

6 To the extent that the new proposed instruction has
7 to be supplemented based on any additional testimony, we
8 can do that. Like I said, we aren't going to be done
9 with the instructions until the evidence is done because
10 we don't know all the evidence that will come in. But
11 as long as we're all clear on that, then to the extent
12 that Mr. Moore is concerned about what people knew when,
13 we certainly can address that with the instructions to
14 make sure it's clear to the jury what's on one side of
15 the side line temperally and what's on the other side.
16 And Mr. Moore, I don't know if I'm addressing your
17 concern or not.

18 MR. MOORE: You're not, Your Honor. I think --
19 here's the point. The evidence in this case is going to
20 be that the so-called threshold limit value, which was
21 adopted by the ACGIH in 1938, was the standard all the
22 way up until 1971. So obviously I don't want to jump
23 over that 1960 line, but I think to keep things in
24 perspective, it's important for the jury to know that
25 that was the standard in place all the way up until that

1 time. I don't think that affects the Court's ruling
2 with regard to the post-1960 --

3 THE COURT: Okay. So I misunderstood your
4 complaint.

5 MR. MOORE: I should -- there's not an issue at
6 this point.

7 THE COURT: Okay. Well then I'll stop talking.

8 MR. MOORE: Me, too.

9 THE COURT: All right. Let's bring in the
10 jury.

11 MR. MCCOY: I will say this, Judge: We have
12 pretty much narrowed most of his testimony to the
13 pre-period, the pre-sale period. We've done that.

14 THE COURT: Okay.

15 MR. MCCOY: And like you said, a couple
16 references later are only in the sense of the
17 unreasonably dangerous aspect of this.

18 THE COURT: Understood. Well, you guys are
19 good attorneys.

20 MR. MCCOY: Basically --

21 THE COURT: I think you understand what's
22 allowed and what's not and I anticipate that everyone
23 will stay on the correct side of the line.

24 MR. MCCOY: Basically that a small exposure
25 will cause asbestos --

1 THE COURT: Right. Well, you don't have to
2 proffer to me. Let's just get the testimony. Okay?
3 Let's bring in the jury.

4 MR. MCCOY: Let me get Dr. Frank.

5 (Jury brought courtroom at 9:05 a.m.)

6 THE COURT: All right. Everyone please be
7 seated. Ladies and Gentlemen, welcome back. I think
8 Mr. McCoy went out to get his first witness. I have a
9 better sight line than you do. I think they're coming
10 back through right now.

11 Mr. McCoy, why don't you have your witness come
12 forward, please.

13 MR. MCCOY: Yes. Dr. Frank.

14 **ARTHUR FRANK, PLAINTIFF'S WITNESS, SWORN,**

15 DIRECT EXAMINATION

16 BY MR. MCCOY:

17 Q All right. Let's go ahead and begin, Doctor, and
18 I'd like you to give us your -- introduce yourself, give
19 us your full name, and spell your last name for our
20 jurors.

21 A Good morning. My name is Arthur Leonard Frank.
22 That's F-r-a-n-k. I currently serve as a Professor of
23 Public Health and Chair of the Department of
24 Environmental and Occupational Health at the Drexel
25 University, School of Public Health. I'm also a

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1 Professor of Medicine at the Drexel College of Medicine
2 in the Pulmonary Division of the Department of Internal
3 Medicine.

4 Q And you have a history of work in asbestos disease;
5 is that correct?

6 A I do.

7 Q When did that start?

8 A It started in December of 1968 when I met
9 Dr. Irving Selikoff. I had been fortunate enough to be
10 asked to join the first class at the Mount Sinai School
11 of Medicine in New York City when it opened as a medical
12 school. Dr. Selikoff met with the first year students
13 that year, talked about the work he was doing with
14 asbestos. I had been doing cancer research actually as
15 a high school student and college student. I published
16 my first paper in college and was enamored with the kind
17 of work he was doing. So I started doing asbestos work,
18 I guess it's 45 years ago now, and I'm still doing it
19 today.

20 Q Have you been to Madison before?

21 A I have. I've been here a number of times. I think
22 the last time was to do a site visit at the University
23 in one of their programs. It was for a NIOSH Program
24 that they were being funded for or potentially funded
25 for and I was asked to do a site visit here.

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1 Q NIOSH stands for?

2 A The National Institute for Occupational Safety and
3 Health. It trains occupational physicians like myself
4 or nurses who do occupational health nursing,
5 toxicologists, industrial hygienists, those kinds of
6 people.

7 Q So when you do a site visit here in Madison, what
8 did you have to do?

9 A We had to go to the University, look at the
10 program, speak to the program director, speak to the
11 residents in the program, and then reach a judgment if
12 we thought the program should be funded or not.

13 Q Which program? What kind of program?

14 A It was the occupational medicine program here.

15 Q At the University?

16 A University.

17 Q Okay. And you are a medical doctor?

18 A I am. As I said, I started at Mount Sinai in 1968.
19 I graduated four years later with my M.D. degree in
20 1972. The rest of my education was that I stayed on at
21 the Mount Sinai Hospital. I did my first year of
22 clinical training in internal medicine; that would be
23 general adult medicine. I left after that first year to
24 become a commissioned officer in the United States
25 Public Health Service. I served in that capacity, had a
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1 commission for 37 years.

2 My active duty in the 1970s for two years was in
3 the lung cancer branch of the National Cancer Institute
4 at the NIH, National Institutes of Health in Bethesda,
5 Maryland, and I looked at the effects of asbestos on
6 respiratory tissue.

7 Two years later, in 1975, I returned to Mount Sinai
8 and I finished two residencies. I finished my training
9 in internal medicine. I also did my training in
10 occupational medicine.

11 Also while I was a medical student, I had started
12 studying for a second doctoral degree, a Ph.D. degree,
13 and ended up in 1977 being awarded a Ph.D. degree in
14 biomedical sciences looking at the effects of asbestos
15 on respiratory tissue. So that would be my formal
16 education.

17 Q You mentioned something about working with
18 Dr. Selikoff.

19 A Yes, sir.

20 Q And when did you start working with him?

21 A I started working with him, as I said, in December
22 of 1968. He became the director of my Ph.D. program.
23 He was also head of the Occupational Medicine Program.
24 When I finished all of my training in June of 1977, I
25 stayed on as a member of his unit. I taught at

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1 Mount Sinai for six years, starting as an instructor,
2 and six years later leaving as an associate professor.
3 But I maintained a relationship with him and interacted
4 with him until the time of his death in 1992.

5 Q What role has Dr. Selikoff played in the study and
6 research of asbestos diseases, briefly?

7 A I think it's fair to say Dr. Selikoff did not
8 discover asbestos-related diseases. Those were known 60
9 or 70 years before I joined him. But he probably did
10 more to illuminate the problem; study groups that hadn't
11 been studied before such as users. They had been
12 studied to a certain extent, but he also spread it out
13 into areas such as family exposure, neighborhood
14 exposure, all of which can give you disease, and he
15 brought the world's attention to the problem of asbestos
16 probably more than anybody else. He was well-known
17 internationally for his work.

18 Q Were you one of his research assistants?

19 A I was. I started as a research assistant that
20 first year in medical school. It was before I knew any
21 clinical activity, so I would do paperwork, abstract
22 charts, do those kinds of research activities. As I
23 gained clinical skills, I would be allowed to do
24 physical examinations and talk to the research subjects
25 that we were examining. And by the time I left in 1984,

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1 I might be in charge of a team of 50 people who would go
2 out in the field and examine the populations that we
3 looked at that. Could have been asbestos insulators or
4 shipyard workers or other kinds of workers like that.

5 Q This field of occupational medicine, do you hold a
6 board certification in that area?

7 A I do. In medicine there are about, I don't know,
8 34/35 or so specialty certifications as physicians. So
9 there's pediatricians, there's surgeons, there's
10 different kinds of surgeons. I actually hold two board
11 certifications and that means I went through an approved
12 residency, passed an exam, and could be called a
13 specialist, both in internal medicine first and then in
14 occupational medicine a year later.

15 Q The field of occupational medicine, what is that
16 concerned with as far as the aspect of prevention of the
17 disease?

18 A Well, occupational medicine is one of the three
19 branches of what's called *preventive medicine*. The
20 other two branches are aerospace medicine and what we
21 call general preventive medicine in public health. So
22 it's one of the three areas that we call *preventive*
23 *medicine*.

24 The reason -- and the focus is different for two
25 reasons I think than all of the other specialties in
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1 medicine. For one, we tend to deal with populations of
2 people, not just individual patients. I've certainly
3 done my share of caring for individual patents. But we
4 also look at populations and study what kinds of
5 exposures, be they in the workplace or in the general
6 environment might make people sick.

7 We do more than that though. We look at not only
8 what might make people sick, but once we identify
9 hazards like asbestos or like benzene or arsenic or all
10 the other things, lead, that we've studied over the
11 years, we then try to institute preventive measures to
12 keep people from getting sick in the future once we've
13 identified that there's, in fact, a hazard.

14 Q And is that applicable then to the asbestos disease
15 concerns?

16 A Absolutely. Asbestos disease prevention is an
17 issue that's over 80 years old. I mean people knew
18 about the hazards and talked about prevention 80 years
19 ago.

20 Q This has all been part of your research?

21 A It is. It is part of my research, part of what
22 I've written about, part of the work that I've been
23 doing these 45 years and teaching about.

24 Q Have you served on any government panels concerning
25 asbestos disease?

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1 A I have. I've served on a number of government
2 boards, both at the federal level, state, and even local
3 level over the years. I've worked for NIOSH, again the
4 National Institute for Occupational Safety And Health.
5 I was on their Grants Review Panel; that is scientists
6 like myself apply for research monies, and other
7 scientists, a group of us, would determine if we thought
8 the research proposals were appropriate, useful or
9 should be funded. I chaired that group the last year I
10 was there.

11 A few years later, I was appointed to the highest
12 level advisory body for the director of NIOSH. It's
13 called the Board of Scientific Counselors. And the
14 director at that time not only appointed me to that
15 Board, but the subcommittee on asbestos and manmade
16 mineral fibers. A number of years later, I just
17 finished my term last year, I spent a four-year term on
18 the Board of Scientific Counselors for the National
19 Center for Environmental Health, part of the CDC, the
20 Centers for Disease Control in Atlanta. And the
21 Environmental Health Institute there also concerned
22 itself, among many other things, with asbestos-related
23 issues. The situation of living in Montana, for
24 example. So those are some of the government activities
25 I've done in this country.

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1 I've advised government officials overseas and a
2 number of countries about asbestos hazards as well:
3 Egypt; Israel; India; China. I could go on. I've done
4 a lot of work internationally over the last 20 or so
5 years.

6 And at the local level, currently in Pennsylvania,
7 for example, I serve as head of the Environmental
8 Justice Advisory Board for the Department of
9 Environmental Protection and on an environmental health
10 tracking grant for the Department of Health. And even
11 in the City of Philadelphia, we have what's called the
12 *Air Pollution Control Board*. We make the rules and
13 regulations for air pollution in the city, and one of
14 areas that we work in is and are concerned about is
15 asbestos. I serve on that Board as well.

16 So I have done, if you will, sort of government
17 service throughout my career.

18 Q And Philadelphia is where Drexel University is
19 based?

20 A Yes.

21 Q And you have teaching responsibilities --

22 A I have teaching -- sorry.

23 Q -- and departmental responsibilities at schools --
24 at the school?

25 A Yes. As the Chair of the Department, I spend
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1 probably a quarter of my time as an administrator
2 looking after the faculty, making sure the Department
3 runs right, managing the budgets, all that kind of
4 thing. Students also bring their problems to me as the
5 Department Chair. I've been in academic all my career,
6 so it's something I've chosen to do and it's what my
7 life has been about.

8 But I also teach. I also see a few patients. I
9 still continue to do research. Some of my current
10 asbestos-related research is looking at workers who have
11 been exposed to a variety of things includes asbestos at
12 a facility in Amarillo, Texas. Before I went to Drexel,
13 I was teaching in the University of Texas system, so I
14 started some work down there on a nuclear facility where
15 there's some asbestos exposure.

16 In part of my international activities, I have a
17 colleague from Sri Lanka, a little country just south of
18 India, island nation, where we've been studying the
19 hazards of asbestos cement, manufacturing for housing
20 materials, showing that that population too has hazards
21 to asbestos.

22 And then in addition to the administrative work,
23 the teaching and the research, I do service activities.
24 What I'm doing here today with you is part of what I do,
25 a small portion of my time. But then I serve on a lot

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1 of committees and organizations around the country and
2 do a fair amount of international travel, generally
3 about four to six trips a year usually to teach and
4 participate in international conferences and such.

5 Q Doctor, I'm giving you Exhibit No. 39. Is that a
6 copy of your current curriculum vitae?

7 A It is. It's my most recent CV, my curriculum vitae
8 or resume up to date as of this month.

9 Q Have you worked for companies and unions?

10 A I have. Over the years I've done work for both of
11 those sectors; for example, when I taught at the
12 University of Kentucky, that was my next job after
13 New York when I became Professor and Chair of the
14 Department of Preventive Medicine and Environmental
15 Health.

16 I did some work for Ashland Doyle. They're
17 probably the largest employer in Kentucky at the time.
18 The thing they asked me to do the first time was give
19 them a talk on the hazards of asbestos in their kind of
20 facilities.

21 I also worked with some coal companies and looked
22 after the health and well being of a number of coal
23 miners. One company hired us and we looked after a
24 thousand miners between underground mines and strip
25 mines. And then various unions over the years have come

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1 to us for advice and work: Construction-type unions,
2 the asbestos workers, elevator installers, and such.
3 But also other kinds of unions that were concerned about
4 hazards of asbestos and occasionally some other things.

5 Q At the request of my law firm, you've reviewed some
6 of the medical records of Gerald Bushmaker; is that
7 right?

8 A I have.

9 Q We'll get to that later. So I think you've talked
10 about a number of -- some of the scientific
11 organizations that you've participated in. Is there any
12 others that you should include today?

13 A Well, I've been a member of a number of
14 organizations that have had significant interest in the
15 area of asbestos. The American Thoracic Society.
16 That's pulmonary physicians in this country. In May, as
17 it turns out, this year's annual convention happens to
18 be in Philadelphia. It's about three blocks from my
19 office and they've agreed to let me give a session.
20 It's called *Meet the Professor Lunch*. It's an informal
21 kind of session and the topic will be asbestos-related
22 disease for the participants who want to learn more
23 about that. They've let me do that.

24 I belong to the American Public Health Association.
25 The American College of Preventative Medicine. I've
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1 served as their occupational medicine regent; two terms
2 as secretary/treasurer for this national organization.
3 And I could go on.

4 The only other one probably worth mentioning is a
5 group called the *Collegium Ramazzini*. Bernardino
6 Ramazzini we consider the father of occupational
7 medicine. He wrote the first textbook in our field in
8 1700. He was an Italian physician, Professor of
9 Medicine, and Dr. Selikoff and a colleague in Italy,
10 Professor Maltoni, back in the early 1980s organized the
11 Collegium Ramazzini. It's limited by its charter to 180
12 physicians and scientists from around the world. I got
13 elected to that in the mid-1980s and I have attended
14 fairly regularly their meetings and have often spoken
15 about my research on asbestos and been involved in some
16 concept papers and documents regarding the hazards of
17 asbestos that have come out of the Collegium. So those
18 would be some of the organizations that I belong to.

19 Q Besides the prevention of diseases, what would be
20 the other primary concerns of occupational medicine as
21 related to asbestos disease?

22 A Well, I think the primary thing is not only
23 identifying disease in those people that have it, but
24 prevention is really what we're about. Some of us even
25 work internationally. There are now over 50 countries

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1 in the world that have totally banned the use of
2 asbestos. We are not one of those countries here in the
3 United States, though use is far less than what we used
4 before. So I am involved in some of these international
5 efforts.

6 I've been asked to testify in front of the
7 Brazilian Supreme Court when they are considering a ban
8 on asbestos for Brazil. So I think the prevention of
9 disease is really what's primary to those of us that do
10 occupational health.

11 Q What research are you doing now in the field of
12 asbestos disease?

13 A Well, as I already mentioned, I'm looking at this
14 population in Texas. I've got this project in Sri
15 Lanka. For about 20 years I did research in China. The
16 factories that we studied there are closed up, so we're
17 looking at some other hazards there.

18 And I do a lot of teaching internationally in
19 talking to my colleagues around the world. I go to
20 India about twice a year generally to teach, help with
21 organizing some international meetings, and often meet
22 with government officials and talk about the hazards of
23 asbestos there, and have sometimes been asked to -- it's
24 not so much research, but when I'm visiting, they'll
25 bring me some x-rays and ask me to evaluate them.

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1 The other area they have a big problem with is
2 silicosis, and so I've been involved with silicas and
3 other dust disease of the lung that I've been asked to
4 look at.

5 Q When you say looking at a population group, can you
6 explain what that means?

7 A Well, most of us are used to going to our own
8 doctors and being cared for one-by-one. When we talk
9 about population groups, we either look at geographic
10 groups; people living in a certain area. I've got a
11 study underway right now that the CDC funded us to look
12 at; a cluster of cancer cases in a three-county area in
13 Pennsylvania, for example. It's not related to
14 asbestos.

15 So we look at this three-county population trying
16 to determine for this form of cancer if we can
17 identify -- it's a blood-related cancer -- if we can
18 identify causes because there's none known right now for
19 that particular disease.

20 But for example with Dr. Selikoff, we would look at
21 populations. He put under long-term surveillance 17,800
22 asbestos insulators. These were unionized insulators.
23 They were all over the United States and Canada. We
24 would go out into the field and examine them literally
25 all over the country and Canada. And he would get

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1 copies, for example, of everybody's death certificate
2 when they died in the union. They were entitled to a
3 death benefit, so they had to send in a death
4 certificate. So it was a very good way to collect a lot
5 of good data.

6 Then he would even go and have his own in-house
7 pathologist look at tissues that were available to make
8 sure the diagnosis was correct. And so it was from this
9 group of 17,000 and the deaths which are in the many
10 thousands at this point and still being followed. The
11 same group, even though he passed away in 1992, it's
12 still being followed at Mount Sinai, we could study what
13 the disease patterns were. And other groups like that
14 have been studied. Shipyard workers. Sheet metal
15 workers. There's been research published on plumbers
16 and pipefitters. I've studied plumbing workers, for
17 example. So that's what we mean by looking at
18 populations of people, not just people one-by-one.

19 Q And when you mentioned those different trades,
20 you're talking about studies about asbestos diseases in
21 those trades?

22 A Yes. That's what I took your question to be.

23 Q Okay. That's what it was about, yes. You've
24 published in the field of asbestos disease obviously?

25 A I have.

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1 Q Can you give us some examples.

2 A Sure. I mean if you look at my CV, I've got
3 somewhere, I don't know, it's 170 or 180 publications
4 over the years now. About half of them have something
5 to do with asbestos; more than any of the other subjects
6 that I've published on. So I've published on some of my
7 Ph.D.-related research.

8 So we were looking at what asbestos would do to
9 tissue culture and organ culture, some studies on whole
10 animals, and then some studies on populations of workers
11 such as we've just talked about.

12 There's a paper in there with Dr. Selikoff on
13 shipyard workers. And then over the years, I've been
14 asked to do either review articles or book chapters. I
15 have due this month a book chapter on the *Hazards of*
16 *Asbestos, Risk Assessment Regarding Asbestos Disease* for
17 a new toxicology textbook. So you'll see that about
18 half of my publications have something to do with
19 asbestos.

20 Q When you testify in court, I'm correct in saying
21 that most always you're working with the plaintiff's
22 counsel?

23 A Almost always. I've worked for companies on a
24 number of occasions and testified for defendants, but
25 the vast majority of the work have been for plaintiffs;

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1 people that have been injured by exposure to asbestos.
2 I will look at their files and if I believe that that's,
3 in fact, the case, will write a report and be prepared
4 to come to court and testify.

5 Q Are you paid personally for your time in court?

6 A No. I've been doing this kind of work, this
7 medical legal work for 35 years now. I started at
8 Mount Sinai, continued it at Kentucky, and then when I
9 was at the University of Texas, now at Drexel, and I
10 just made it my judgment 35 years ago that I was getting
11 well enough paid as a physician, as an academic doctor,
12 and I didn't need the extra money and so I saw to it
13 that the money was always paid to the University.

14 I personally never kept even a penny of that money
15 over the years. For 30 years now, I've been a
16 Department head, so I get to use that money. And so
17 right now, for example, at Drexel, the Dean, with her
18 approval, gives me opportunities to use the monies that
19 I bring in, so I hire extra faculty and extra
20 secretaries and pay for teaching assistants and research
21 assistants for the junior faculty. And I do a lot of my
22 international work over the years having used these
23 kinds of funds. That's what allows me to go to India
24 twice a year or do research in China. But certainly,
25 I've never kept any of the money for the 35 years I've

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1 been testifying.

2 Q What's the current hourly charge for your time in a
3 lawsuit?

4 A The University bills at \$425 an hour for my time
5 for medical legal work.

6 MR. MCCOY: Judge, I've got a few questions. I
7 think that the doctor wanted to use the easel.

8 THE COURT: Oh, sure. He's free to move about
9 the courtroom, draw on the boards, whatever he needs to
10 do.

11 THE WITNESS: Thank you, Your Honor.

12 THE COURT: I guess the question is, Mr. Moore,
13 you're free to move about if you wish. Would you rather
14 have it back a little further?

15 MR. MOORE: I don't know if we're breaking the
16 prom date rule also there.

17 THE COURT: Right. You've got to be at least a
18 couple feet away from the edge. Why don't you come
19 closer to the middle here.

20 MR. MOORE: I've got an 18-year-old, Your
21 Honor, so I know that rule. Your Honor, may I?

22 THE COURT: Of course.

23 BY MR. MCCOY:

24 Q Doctor, I'm going to let you be the guide on this,
25 and as you -- I've already mentioned to you we heard the
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1 testimony of Dr. Arnold Brody, so we don't want to be
2 too repetitive. But I know your focus is on
3 occupational medicine and the emphasize in your career
4 has been different, so I think the first question that
5 I've got here in my outline is simply what is asbestos?

6 A Sure. Asbestos is a commercial term. It's not a
7 neurologic or a scientific term. And it refers to two
8 families of fibers. There are two groups of fibers.
9 The first group is called the *amphiboles*. There are
10 five members of this group and there's all together six
11 minerals and they are naturally occurring. What we mean
12 by that, they're not made by man, they're mined, they're
13 processed out of nature and then put into products.

14 Five of them are amphiboles and they're
15 characterized -- every one is different chemically, but
16 they're fairly straight and needle-like. And they're,
17 as I said, chemically very different, different colors
18 and so forth.

19 The other type is called the *serpentine form*.
20 There's one member of that group called *chrysotile*. And
21 the reason it's called serpentine is it looks different.
22 It looks a little bit like a snake or a worm under the
23 microscope. It has curvatures to it. So that's what
24 separates these two families within what we call
25 asbestos.

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1 Q I'm going to just change the angle on this because
2 it's a little hard with you -- kind of step in front of
3 the court and jurors here. Right here.

4 A So the first thing is this is what we call
5 asbestos. That's what we're dealing with. The second
6 issue is what diseases do we get from exposure to these
7 materials. And these too are divided into two kinds of
8 disease. There's the nonmalignant and the malignant.
9 And what we mean of course by malignancy is is it not
10 cancer or is it cancer, and you can get two kinds of
11 disease from asbestos.

12 The major problem you get of the nonmalignant form
13 is asbestosis, and we'll describe that a little bit more
14 in a minute. There is also something called *asbestos*
15 *warts*; gets into the skin. These are a wart-like
16 structure. Not a serious problem.

17 And there's something called *benign asbestotic*
18 *pleural effusion*. Again, pretty rare. It's the first
19 finding within about ten years in a few people. What it
20 does is it irritates the lining of the lung, and we'll
21 talk about that, and causes fluid to build up in the
22 lung. It actually scares the clinician. I've had to
23 deal with a few of these because it's a bloody fluid and
24 you really think you're dealing with a cancer.

25 But the biggest problem is asbestosis, and even
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1 though it's not malignant, it can be a cause of death.
2 In the group of insulators that we studied with
3 Dr. Selikoff, roughly 10 percent of them die of
4 asbestosis. Pulmonary insufficiency. They just can't
5 move enough oxygen into their body anymore.

6 Then we have the malignant problem, and there are a
7 whole range of cancers that can occur from exposure to
8 asbestos. The most important one and the most common
9 one is lung cancer. As I think we'll hear, that's what
10 we're dealing with here today.

11 There's a rare cancer called *mesothelioma*. This is
12 a cancer of the lining tissues of the lung or the
13 abdomen. And then there are a whole host of other
14 cancers: Gastrointestinal tract cancers, kidney cancer,
15 laryngeal cancer, and in women ovarian cancer. And
16 again, that's not the subject of today's proceedings,
17 but these are the kinds of cancers that you can get from
18 working with asbestos.

19 Some people can get asbestosis and never get
20 cancer. Some people get cancer, but never get
21 asbestosis. And some get both. Why this happens I'll
22 try and describe in just a moment.

23 There is something called the *dose response*
24 *relationship*. Basically what this tells us is as the
25 amount of exposure goes up, the likelihood of getting a

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1 disease goes up. Now I've drawn this line here, sort of
2 placed somewhat arbitrarily because no one really knows
3 where this threshold is. But what we do know and what
4 everybody agrees, it takes a lot of asbestos to produce
5 asbestosis. So you have to cross some threshold.

6 All of us, everybody in this courtroom today, has
7 some small amount of asbestos in our lungs. Why is
8 that? Because it's naturally occurring. It's out there
9 in nature. It's been used for many years in products.
10 We all breathe a little bit of asbestos. So we're way
11 down here somewhere; not at zero, but at very low
12 levels, and at very low levels the likelihood of getting
13 disease is very low.

14 None of us with just background exposure will ever
15 get to the point of having asbestosis. Cancer, however,
16 is different. How much asbestos does it take to produce
17 a cancer in a human or in an animal? The answer is very
18 little. How little? We know from animal experiments,
19 groups of animals, one day of exposure in an inhalation
20 chamber was enough to give some animals mesotheliomas or
21 lung cancers. We know from case reports in humans --
22 again, you can't find a lot of people with just one day
23 of exposure, but there are such people: A man in
24 England who cut asbestos boards to make a shed in his
25 back yard one day; others who work with material just

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1 for one day, and they ended up with mesotheliomas.

2 One of the populations that we studied with
3 Dr. Selikoff was a factory where they made asbestos
4 products. It was during World War II and some people
5 worked for very short periods of time. Some found it
6 too dusty and dirty, some entered the military, some got
7 better jobs at the shipyards, some people worked a week,
8 two weeks, a month, a couple months. And we found
9 working one month or less, a month, two weeks, a week,
10 doubled your risk of getting lung cancer. So a month of
11 work or less was enough to double your risk of lung
12 cancer.

13 We showed in that population by the time you worked
14 for two years, you had a seven-fold excess risk of
15 getting lung cancer. So we know that it takes very
16 little asbestos to produce the various kinds of cancers.

17 Now asbestos gets into the lungs basically when we
18 breath it in. The body has efficient mechanisms to keep
19 harmful materials like asbestos out. It starts up in
20 your nose with hairs, it's in your mouth with saliva
21 that will trap things. So that will keep some of it
22 from getting into the lungs. You have little hair-like
23 cells in your upper airway, little mucus globules that
24 will trap foreign materials. It could be viruses or
25 bacteria or coal dust particles or asbestos particles,

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1 and the body then pushes it up and out and we swallow
2 it.

3 Nevertheless, some of it will get down into the
4 lungs and it will cause scarring in two places. It will
5 cause scarring in the lung tissue itself and we call
6 that *parenchymal asbestosis*.

7 And then there's a covering around the lung. Let
8 me try and explain how we look at the lung.

9 Those of you who have a kitchen sponge at home, you
10 have those little holes in it, and the sponge on your
11 kitchen sink will hold water. The lung is a collection
12 of air sacs, like your sponge, except they hold air
13 instead of water. If you took that kitchen sponge and
14 wrapped a piece of Saran Wrap around it, you'd now have
15 a covering around it, and that's exactly what happens
16 with the lung.

17 There's this tissue called the *pleura* and it's a
18 Saran Wrap-like coating around the lungs. It's normally
19 one to two cells thick. You need a microscope to see
20 it. You'd never see it on an x-ray unless it's damaged.

21 So asbestos not only gets into the lung, but it
22 gets out to the pleura and it causes scarring. So you
23 get scarring in the lung. What do I mean by scarring?
24 If you've ever cut yourself with a kitchen knife, you
25 get a scab. It falls off. You're left with nice normal

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1 skin. The same kind of tissue, the scab is what grows
2 in the lung, except it doesn't fall off. It doesn't go
3 away. It's permanent. It will be there forever. The
4 lungs don't respond like the skin done.

5 Similarly if there's scar tissue in the pleura --

6 Q Technological failures before. But this?

7 A Not a big issue. We'll clip it in. I'll be more
8 careful.

9 Sometimes this can become thickened. It can also
10 become calcified. And that shows up on x-rays very
11 clearly as big white thick areas. Calcified pleural
12 plaque. Not all of them become calcified. But when you
13 see them, it is a result of scarring which has then
14 become filled up with calcium that the body deposits
15 there.

16 The disease in the lung itself has always been
17 called asbestosis. Up until relatively recently, this
18 pleural scarring was also called asbestosis, and some of
19 us still call it that. I was trained by Dr. Selikoff.
20 He called it pleural asbestosis. Some people use a
21 different term, they call it asbestos-related pleural
22 disease or pleural plaques or pleural thickening. But
23 whatever you call it, it's a disease. It's caused by
24 asbestosis or by asbestos and it really is just another
25 manifestation of asbestosis. Textbooks back in the 30s

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1 all talked about the pleural changes of asbestosis.

2 You also can get lung cancer. That's the same
3 kinds of lung cancer you get from many other things:
4 From arsenic or isopropyl or cigarettes or radiation,
5 all of which can cause lung cancer. And you can get a
6 cancer in the pleura called, as I said, a mesothelioma.
7 So these are the diseases that one gets in the lung.

8 The last point I want to make is when do these
9 diseases develop. If I would throw a whole bunch of
10 asbestos on top of all of you today, would you get sick
11 tomorrow or next week or next year? No. There's what
12 we call a latency period. And the latency period starts
13 for these diseases at ten years and lasts a lifetime;
14 whereas some kinds of cancer-causing materials, the body
15 deals with and gets rid of it. It metabolizes it. It
16 puts it in the urine. It adds it to your bile, in your
17 gallbladder, whatever. It can get rid of some of these
18 carcinogens.

19 Once asbestos gets in the lungs or out to the
20 pleura, and we know it gets to both of those areas, it
21 will stay there forever. The body will clear some of it
22 over time, but at the end of somebody's lifetime I've
23 seen these diseases in people in their 90s who hadn't
24 been exposed for 30 years but had been exposed in their
25 20s. You never outgrow your risk of getting disease

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1 from your exposure to asbestos.

2 So this is, from a medical standpoint, what we're
3 concerned about. The greater the dose, the more likely
4 you are to get disease. It takes a lot to produce
5 asbestosis that we've talked about. And why some people
6 get one disease and some get the other we really don't
7 know. But some can get both.

8 I think that finishes what I would like to do with
9 this.

10 Q Okay. One follow-up question I have, Doctor. In
11 terms of the causation of asbestos disease, if someone
12 has got a one-day exposure and a one-week exposure and a
13 one-hour exposure and on and on, a one-month exposure
14 throughout a number of years or even decades because
15 they're working in that type of a setting where there's
16 asbestos fibers being released, how does that factor
17 into the assessment of causation?

18 A Well, that goes back to this issue of dose
19 response. Every one of those, the one hour, the one
20 day, the one week, the ten years, they all cumulatively
21 add to your exposure, putting you at risk for developing
22 cancer, or if you get enough and cross a threshold,
23 enough to get some version of asbestosis.

24 So when you see someone who has been exposed to
25 asbestos who appears to have asbestos-related disease,

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1 you have to say that all of the exposures that they had
2 through their lifetime contributed to the total dose,
3 which contributed to the total response of whatever
4 disease they developed.

5 Q All right. I'll let you go ahead and take your
6 seat back.

7 A Thank you.

8 Q Based on your review of the medical records of
9 Gerald Bushmaker which had been provided to you by my
10 firm, what asbestos-related diseases did Mr. Bushmaker
11 have?

12 A In looking at the records that I got regarding
13 Mr. Bushmaker, which included his exposure history and
14 medical records, I believe that he had developed two
15 asbestos-related diseases. One was a nonmalignant
16 disease, the disease of asbestosis. The second was a
17 lung cancer that I felt was caused by his exposures to
18 asbestos as well.

19 Q Now there's also some reference in Mr. Bushmaker's
20 medical records to calcified pleural plaques.

21 A Yes, sir.

22 Q Which category does that fit within of the two
23 diseases?

24 A That's part of asbestosis, and particularly if you
25 would ask me are there other things that will give you

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1 calcified plaques, one-sided individual plaques could
2 come from something else. I've seen that from people
3 with trauma to their chest, broken ribs and so forth.
4 But when there are multiple and bilateral, both sides,
5 pleural plaques, the only thing that I have ever seen or
6 ever read about that will do this is exposure to
7 asbestos.

8 So when you see bilateral calcified plaques, if I
9 would see that on an x-ray and you wouldn't tell me
10 anything about the exposure history, the first thing I
11 would ask is gee, I wonder if this person had asbestos
12 exposure and could I determine that.

13 Q How did you go about determining the cause of
14 Mr. Bushmaker's lung cancer?

15 A I did what I always do with any patient, be it the
16 patient that I examine myself or when I review records,
17 I go through the medical records that are sent to me or
18 get a history; I find out what exposures they had; find
19 out what disease they've -- disease or diseases they've
20 developed, and then make a relationship with that.

21 Now, in the case of Mr. Bushmaker, we had two
22 factors in his history that potentially could have given
23 rise to a lung cancer. I read early on that there was a
24 history of smoking, and we all know -- I mean we all
25 should know at this point that smoking can lead to the

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1 development of lung cancer. But it's not all smoking,
2 and it depends on a number of things. It depends on
3 when you smoked, did you stop smoking, how long ago did
4 you stop, and how much did you smoke.

5 In getting a history, which I had in my report and
6 which I've verified with Mr. Bushmaker directly, he did
7 have a smoking history. When he was in the Navy, which
8 was in the 40s, he smoked one to two cigarettes a day
9 for about a 16-month period. Never smoked cigarettes
10 again.

11 He then smoked cigars, which he would do
12 intermittently and occasionally, and his cigar smoking
13 stopped some time it appears in the late 1960s. It
14 might be as late as 1970, but we think it's the late
15 1960s, and my report reflects that and that's the
16 history that I got in speaking with Mr. Bushmaker and
17 his family.

18 As I said, there are some cancer-causing agents
19 that the body is able to get rid of over time. One of
20 those is -- and there are many cancer-causing agents in
21 tobacco smoke that the body can get rid of.

22 We also know from studies done by organizations
23 like the American Cancer Society if you can get somebody
24 to give up smoking, their risk of lung cancer reduces
25 over time. Now the data varies. The older data showed

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1 that if you gave up cigarettes for about 25 years or so,
2 your risk of getting lung cancer was about the same as a
3 nonsmoker. More recent studies show that it's a bit
4 longer than that; that by the time you're -- it takes
5 maybe 35ish or so years before your risk is essentially
6 the same as a nonsmoker.

7 But in the case of Mr. Bushmaker, we have someone
8 who stopped, let us say, in 1970, we'll take that as the
9 latest, and it probably was a bit earlier, and he had
10 his lung cancer in 2006, December. So it was, what, 36
11 years without any smoking, and at that, it was cigar
12 smoking, which he didn't inhale.

13 So the role of tobacco, if any, was extremely small
14 and was likely essentially noncontributory or a minor
15 contributing factor compared to the overwhelming
16 exposures he had to asbestos with the evidence of his
17 asbestosis and the permanence with which asbestos stays
18 in the lung.

19 So this is what I do when I get a chart. I think
20 about other exposures. I ask, you know, as I read
21 through the chart and I looked at the kind of work that
22 he did, I knew that he was a pipefitter. I've dealt
23 with pipefitters before. I know the kinds of exposures
24 they have. Was there anything else that I could say
25 caused his -- the x-ray changes that were diagnosed as

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1 asbestosis, and the answer is no, he had no other
2 exposures that I'm aware of that would do that.

3 And with regard to his lung cancer, he had no other
4 exposures to other materials that I know that cause lung
5 cancer. I've written about that. I had no evidence
6 that he had any of those exposures, so I was left with
7 the smoking, which we've just discussed. But
8 overwhelmingly, I was left with the concept that the
9 asbestos caused his lung cancer.

10 Q Now, the methodology that you just talked about in
11 terms of how you assess the different exposures and time
12 period and so on, is that the same methodology that was
13 being used back when Dr. Selikoff and you, as one of his
14 assistants, were studying population groups?

15 A Sure. I mean this is standard medical methodology.
16 You know, for any of you who have ever been to a doctor
17 and have ever been diagnosed about anything, you've
18 asked well doctor, what caused it, and this is the kind
19 of thinking doctors go through in determining what the
20 cause of disease was. Not only do we have that with
21 regard to an individual patient, but we have literally
22 decades and decades of scientific writing which address
23 these very issues. And so we have this concept of what
24 can cause these diseases in general in people, and then
25 we have the specific question what caused it in

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1 Mr. Bushmaker. And so that's how I've couched my
2 answer, both in terms of what we know in general about
3 the science and specifically looking at the facts of the
4 case with regard to Mr. Bushmaker.

5 Q Does the term *marker of asbestosis disease* have a
6 meaning to you in the context of assessing the cause of
7 Mr. Bushmaker's lung cancer?

8 A Yes. Again, as I already said, the bilateral
9 calcified plaques pretty much tell me, even if I never
10 read any history and just saw that x-ray, would tell me
11 that there was probably asbestos involved. And clearly
12 when I got the scientific or the medical records and the
13 history of exposure, it was clear that he had a
14 significant exposure to asbestos and it was a marker for
15 what the changes were on his chest x-ray.

16 Q How is it that you or science has determined that
17 bilateral calcified pleural plaques are a marker for
18 asbestos?

19 A Because this has been studied. There's a study,
20 for example, in Finland. In one county, there's no
21 asbestos mined and there were roughly 7,000 x-rays
22 taken.

23 Q No asbestos what?

24 A No asbestos mined. A mine. Where they were taking
25 it out of the ground and processing it.

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1 Q Okay.

2 A They looked at 7,000 x-rays in that county and
3 found not a single, not a single pleural plaque or
4 calcified plaque.

5 In the second county where they did have an
6 asbestos mine, which has now been shut down, they don't
7 mine it there anymore, they again took about 6,300
8 x-rays, similar number, thousands and thousands of
9 x-rays, analyzed them and 499 people had calcified
10 plaques. So it was related to the mining activity. In
11 the other county, not a single one.

12 So it's that kind of data and the experience that
13 one has in reading x-rays. For example, one of my
14 studies in China I was looking at three asbestos
15 factories makes asbestos products over there. I read
16 1,600 sets of x-rays, and not everybody, of course, had
17 pleural plaques, not everybody had asbestosis, but a
18 considerable number of the workers did. And again, it
19 was related to their exposures to asbestos.

20 Q So what's the significance of that, calcified
21 pleural plaques as a marker specifically with regard to
22 the causation of Mr. Bushmaker's lung cancer?

23 A What it tells us is that he has had a significant
24 amount of exposure. Remember I said you have to pass
25 this threshold to get to having asbestosis manifested by

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1 pleural plaques or parenchymal changes, which tells me
2 and tells people who understand exposure to asbestos
3 that he certainly has had enough exposure to have
4 developed his lung cancer from asbestos.

5 Q Besides the bilateral calcified pleural plaques, is
6 there -- what other types of indicators would there be
7 that would show up as asbestosis in the diagnosis?

8 A Well again, if you read some of the CT scan
9 reports, and he's had a lot of CTs over the years,
10 they're following up ever since he had his lung cancer
11 operated on, it's the kind of evaluation you have to
12 keep doing after somebody has had cancer to make sure it
13 doesn't come back. Occasionally the radiologist will
14 report fibrotic changes in the lung, and then there was
15 an official, what we call a B-read. There's a certain
16 exam one takes to read x-rays and be certified by NIOSH.
17 And there's a B-reader report that said he had bilateral
18 irregular opacities. They divide the lung into six
19 zones: Top, middle and lower and it was the four lower
20 lung zones that had irregular opacities, which are the
21 type that you would see with asbestos, along with the
22 pleural plaquing.

23 So there was evidence not only in the tissue
24 itself, but in the lining around the lung that there
25 were changes consistent with his exposures to asbestos.

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1 And nothing in the history, no other cause as I read the
2 medical records that would give him these changes.

3 Q What about linear areas of scarring at the lung
4 bases?

5 A Well, that's the irregular opacities at the lung
6 bases that were read by both radiologists in looking at
7 his radiologic tests and by the B-reader.

8 Q What do those have to do with asbestos?

9 A They're caused in -- well, there are many things
10 that will cause that appearance -- not that many.
11 There's other dusts that will do it. There's no
12 evidence that he was exposed to other such dusts.

13 There are other medical conditions that will do it.
14 For example, severe rheumatoid arthritis. People who
15 have crippling arthritis of their fingers can get
16 changes in their lung. There's no evidence, nothing in
17 the records that says Mr. Bushmaker had severe
18 rheumatoid arthritis with rheumatoid lung disease.

19 There are certain chemicals that will do it.
20 There's a pesticide called *paraquat* that will give you
21 these changes in the lung. There's no exposure --
22 there's no evidence he was exposed to paraquat. So, you
23 go through this differential diagnosis and are left, in
24 his case, saying that the only thing that seems, you
25 know, more likely than not scientifically and medically

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1 to be the cause of his changes are his prior exposures
2 to asbestos.

3 Q Is there any exposure, besides asbestos, that can
4 cause the calcified pleural plaques?

5 A Well, as we talked about already, trauma can do it.
6 Unilaterally very, very rarely tuberculosis can do it if
7 you get tuberculosis at the outer edge of the lung.
8 There are a few things, but not bilaterally and not with
9 the intensity that we saw reported in the records of
10 Mr. Bushmaker.

11 Q I want to talk about some of the scientific
12 literature. You've mentioned some of it. But what
13 other scientific literature do you consider as a
14 physician when you are looking at Mr. Bushmaker's
15 situation in assessing the cause of his lung cancer?

16 A Well, when I'm given a case like his, and I'm given
17 a fair number of cases each year to look at for
18 potential asbestos disease, sometimes I tell the lawyers
19 it's a case that I don't see a relationship because the
20 disease that's in question is not one that I believe is
21 caused by asbestos.

22 But when I'm asked a question like that about what
23 do I draw upon, what literature have I read, I started
24 reading asbestos literature back in 1968. Dr. Selikoff
25 gave me papers to read and I haven't stopped reading

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1 them since. So there's thousands and thousands of
2 articles. And so if there's a specific question of does
3 it cause lung cancer, what kind of lung cancer, where in
4 the lungs, which fiber type, you know, any kind of
5 scientific question that could be raised, I can answer
6 them. I draw upon all of that knowledge and experience
7 as I look at these specific cases.

8 It goes back to what I said, there's this general
9 understanding of what asbestos can do and then I take
10 the general understanding and the specific facts of a
11 specific case, in this case Mr. Bushmaker's or anybody
12 else's, and say do they fit in this pattern and can I
13 make the relationship there.

14 For example, one case I remember doing where I
15 didn't make the relationship, we talked about latency
16 before. Somebody claimed that they were exposed to
17 asbestos and four months later got a lung cancer. I
18 didn't connect those two. The science tells me I can't
19 do that.

20 So I draw upon all of that reading and my
21 experience, having looked at thousands of x-rays,
22 thousands of charts, thousands of individuals as either
23 patients or parts of research studies to reach
24 conclusions about any given case.

25 Q Do you look at literature if it exists specific to
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1 the trade?

2 A I do, and there are obviously many different trades
3 that have been exposed to asbestos and there are many
4 different products. One of the book chapters that I
5 wrote for a book a few years ago was on the *History of*
6 *Uses of Asbestos*. One of things we know that in the
7 past, not so much anymore fortunately, but in the past
8 3- to 4,000 different products had asbestos in them.
9 Now there's not a scientific study on each of those 3-
10 or 4,000 products and there isn't a scientific study on
11 every kind of trade, but there are studies, and
12 specifically on pipefitters, Mr. Bushmaker was a
13 pipefitter for a good part of his working career. And
14 so we know that pipefitters in general get an excess of
15 asbestos-related disease, and so I bring that to bear as
16 well when I look at the specifics of Mr. Bushmaker's
17 case.

18 Q What about insulators?

19 A Insulators are probably the best studied group.
20 That's a group certainly we studied with Dr. Selikoff.
21 I've seen insulators since I left Mount Sinai.
22 Insulators have been looked at in other settings, and so
23 we know a lot about insulators.

24 We even have very good data as to what percentage
25 of them will get certain kinds of disease. That's why I
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1 was able to tell you that 10 percent die of asbestosis,
2 20 percent of them die of lung cancer. Another roughly
3 10 percent die of mesotheliomas.

4 About 50 percent of all insulators will die of an
5 asbestos-related disease. It's not the kind of data you
6 see in the general population, it's enormously more.
7 That's why, you know, others have spoken about the
8 asbestos epidemic in this country.

9 Q Dr. Frank, change topics here for a moment. Have
10 you studied literature which reports about the distances
11 that asbestos fibers might travel after they've been
12 released into the air?

13 A I have. That's not the kind of --

14 MR. MOORE: Four corners, Your Honor.

15 THE COURT: If it's in the report, you can ask
16 about it. If not, you've got to move on, please.

17 MR. MCCOY: Judge, can I be heard on this?

18 THE COURT: You may. Let's go side bar.

19 MR. MCCOY: Actually, Judge, I think I have
20 another question. I'll withdraw that one.

21 THE COURT: As you wish.

22 MR. MCCOY: Thank you, Judge.

23 BY MR. MCCOY:

24 Q Dr. Frank, does the term bystander have a meaning
25 when you assess causation?

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1 A It does.

2 Q Okay. Can you explain what a bystander is?

3 A People can get asbestosis disease who never handle
4 it. That occurs in many different settings,
5 particularly in the construction trades or in the
6 shipyard. In the shipyard, about 2 percent of workers
7 do what's called *spraying and lagging*. They put in
8 place asbestos-containing materials. And yet because of
9 the enclosed space and the fact that the asbestos will
10 go all over the ship, in fact all over the shipyard,
11 other workers who don't handle it who are bystanders and
12 in shipyards, for example, that would include the naval
13 architects, the security guards and so forth can get
14 asbestos disease because some people are using it and
15 they're nearby.

16 Not only does it work that way in workplaces, but
17 you can bring asbestos home on your clothing, in your
18 beard, in your hair, and contaminate a household. And
19 we know -- and we give that a different name. That's
20 not bystander, that's familial or household exposure.
21 And people can get disease, both asbestosis, meaning
22 there's a lot in that household or some people don't get
23 asbestosis, but they end up with excess lung cancers and
24 cases of mesothelioma from exposure.

25 So you don't have to work with it and the material
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1 can spread in a way that others get exposed who aren't
2 handling it.

3 Q Doctor, I'd like you to assume certain facts here
4 and I'm going to ask you about your opinion if those
5 facts are proved. I want you to assume that a removal
6 of Philip Carey asbestos cement and block insulation was
7 done by Mr. Bushmaker on a high temperature water system
8 and created so much dust that it looked like snow.

9 Do you have an opinion to a reasonable degree of
10 scientific and medical certainty about whether such
11 exposures caused Mr. Bushmaker's lung cancer?

12 A I do have an opinion and that would have been part
13 of the --

14 MR. MOORE: (Stands)

15 THE COURT: I'm sorry, I think we've got an
16 objection.

17 MR. MOORE: I'll wait for the next question,
18 Your Honor.

19 THE COURT: All right. Then you can answer
20 that one, Doctor.

21 THE WITNESS: Thank you, Your Honor. As I was
22 saying, I do have an opinion and my opinion would be
23 that that exposure --

24 THE COURT: Wait.

25 MR. MOORE: Now I have an objection. I was
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1 waiting for the next question, but it wasn't asked what
2 the opinion is. I do have an objection based on
3 foundation, Your Honor; that the fact that the --

4 THE COURT: Based on the specification of the
5 product?

6 MR. MOORE: That --

7 THE COURT: Let's go side bar real quick.

8 MR. MOORE: Yes, Your honor.

9 THE COURT: Hold that thought, Doctor.

10 THE WITNESS: I will. Thank you.

11 (Discussion at side bar at 10:12 a.m.)

12 THE COURT: The objection is?

13 MR. MOORE: That there hasn't been established
14 a requisite predicate for this question; that there's no
15 evidence in the record to support the basis for the
16 hypothetical.

17 THE COURT: But break it out for me more in the
18 sense that's it's Philip Carey or there was snow --

19 MR. MOORE: Exactly. There's no evidence that
20 was asbestos-containing. There's no evidence of any
21 snow. It's not disclosed in any deposition transcript.
22 I mean there's -- I don't even -- there's no facts in
23 the record to that effect.

24 THE COURT: Well, I think I can predict the
25 response. I'll let you make it and then I'll give you
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1 the Court's thoughts.

2 MR. MCCOY: All right. Our response is that
3 the evidence will be presented as foundation. And
4 again, we have to prove up these things, otherwise these
5 hypotheticals will be ultimately left to the jury. But
6 these specific facts will be proved to the extent they
7 haven't already been proved. We haven't had
8 Mr. Bushmaker testify, but he will be testifying about
9 the specific matters.

10 THE COURT: Okay. Well, and for --

11 MR. MCCOY: And these --

12 THE COURT: Stop. For that reason, I'm going
13 to deny the objection because as the instructions have
14 already told the jury, this is one of the preliminary
15 instructions and certainly we'll be able to get those
16 again and you can argue this, an expert's opinion based
17 on a hypothetical has no value unless the underlying
18 facts have been proved. So if he wants to proffer to
19 the Court that he can prove this up, then I will let him
20 ask the question and get the answer.

21 MR. MOORE: Sure. Absolutely. And in lieu of
22 doing this exercise on any other hypotheticals, I'd like
23 to have a continuing objection to the basis and to
24 the --

25 THE COURT: Certainly you're entitled to
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1 continue objecting to the end of the case if you think
2 the hypotheticals have not been properly supported and
3 you want a court instruction to that effect, you can
4 certainly ask for it. Mr. McCoy of course thinks you
5 won't get there from here, but let's see how the
6 evidence plays out. Okay?

7 MR. MOORE: Yes, sir. Thank you.

8 (End of side bar discussion at 10:13 a.m.)

9 MR. MCCOY: Should we just have the last
10 question and answer read back?

11 THE COURT: If we can get there from here.

12 MR. MCCOY: If not, I'll start it again.

13 THE COURT: That might be better. And Doctor,
14 he gets to ask if he wants to, so let's see what
15 Mr. McCoy wants to do.

16 THE WITNESS: You did ask me to hold the
17 thought and I did try to do so.

18 MR. MCCOY: I'm going to go back to just
19 restating the assumptions I asked the doctor to make
20 very quickly here.

21 BY MR. MCCOY:

22 Q So assume, Doctor, that the removal of Philip Carey
23 asbestos cement and block insulation was done by
24 Mr. Bushmaker on a high temperature water system and
25 created so much dust that it looked like snow.

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1 Do you have an opinion to a reasonable degree of
2 scientific and medical certainty about whether such
3 exposures caused Mr. Bushmaker's lung cancer?

4 MR. MOORE: Object to the form of the question
5 again. Caused or a cause.

6 MR. MCCOY: I'll rephrase it, Judge, to state
7 were a cause of Mr. Bushmaker's lung cancer.

8 THE WITNESS: Yes, I do have an opinion, and my
9 opinion would be that that exposure, as you outlined,
10 would have been part of his cumulative overall exposure
11 that would have led to his developing his lung cancer
12 and to his asbestosis.

13 BY MR. MCCOY:

14 Q What is your basis for saying that?

15 A The basis is what we just discussed with the jury
16 that the cumulative exposure is what ends up giving you
17 your disease. It is all of the exposures that one has
18 and whatever makes up that exposure is contributory to
19 the development of those diseases.

20 Q I'd like you also to assume some other facts.

21 Assume Mr. Bushmaker had about six months of exposure
22 during the years of about 1947 to 1952 as a bystander
23 working in the same or adjacent rooms to persons who
24 were cutting and sawing asbestos-containing Philip Carey
25 millboard in home construction work and that that

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1 cutting and sawing released asbestos fibers into the
2 air.

3 Do you have an opinion to a reasonable degree of
4 scientific and medical certainty about whether such
5 exposures caused Mr. Bushmaker's lung cancer?

6 A I do have an opinion and that also would have been
7 a contributing cause as part of his overall cumulative
8 exposures.

9 Q What about his asbestosis?

10 A Both for his lung cancer and for his asbestosis.

11 Q Have you read publications about different kinds of
12 asbestos products in terms of disease causation
13 assessment?

14 A I have read about them. I've written about them.

15 Q Does that include cement and block materials?

16 A Yes, sir.

17 Q And board, millboard-type materials?

18 A Yes, sir.

19 Q Another set of assumptions here. Assume
20 Mr. Bushmaker had ten months of exposure one or two
21 hours per day during the years 1955 to 1956 as a
22 bystander in the same areas as insulation crews that
23 were cutting and sawing Philip Carey asbestos block and
24 also mixing Philip Carey asbestos cement to be fitted
25 onto a high temperature water system.

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1 Do you have an opinion to a reasonable degree of
2 scientific medical certainty about whether such
3 exposures also caused -- were a cause of Mr. Bushmaker's
4 lung cancer and asbestosis?

5 A Yes, I do have an opinion. And again, those
6 exposures as you've just outlined would have been part
7 of his cumulative exposure giving rise both to his
8 asbestosis and to his lung cancer.

9 Q And I have a couple other assumptions here. The
10 next one is assume Mr. Bushmaker had ten months of
11 exposure, one or two hours per day, during the years
12 1955 to '56 as a bystander in the same areas as
13 insulation crews that were only mixing Philip Carey
14 cements and applying them to a high temp water system.

15 Do you have an opinion to a reasonable degree of
16 scientific and medical certainty about whether such
17 exposures to the asbestos cements only were a cause of
18 Mr. Bushmaker's lung cancer?

19 A I do have an opinion and my opinion would be to the
20 extent that he had such exposures, they too would have
21 added to his cumulative exposures giving rise both to
22 his asbestosis and to his lung cancer.

23 Q Okay. Last set of assumptions here. Assume Mr.
24 Bushmaker had 25 years of repair and maintenance work
25 which involved about 25 -- 25 percent of his time

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1 working on a high temperature water system and that the
2 work, repair and maintenance on that required removing
3 and reinstalling asbestos containing Philip Carey cement
4 and block insulation and this took place during the
5 years 1956 to about 1980.

6 Do you have an opinion to a reasonable degree of
7 scientific and medical certainty about whether such
8 exposures caused Mr. Bushmaker's lung cancer and --

9 MR. MOORE: (Stands)

10 THE COURT: Wait, I think we've got an
11 objection to that.

12 MR. MOORE: I do have an objection. I need to
13 be heard at side bar on this one.

14 THE COURT: All right. Let's go side bar.

15 (Discussion at side bar at 10:18 a.m.)

16 THE COURT: Okay. And the objection is?

17 MR. MOORE: Yeah, this time now we're past even
18 the period of exposure. My ability here --

19 THE COURT: Right. You went out to 1980 with
20 that hypothetical.

21 MR. MCCOY: Yeah, but the causation question is
22 different than the issue of knowing -- the causation
23 question has to be established, of continuing ongoing
24 exposure that's relevant to causation independently of
25 anything else.

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1 THE COURT: Okay. So I may be not tracking the
2 time line properly, but is Mr. Bushmaker going to
3 testify that he was exposed to Philip Carey products up
4 to 1980?

5 MR. MCCOY: He's going to testify that he was
6 exposed during the removal and repair work. About 25
7 percent of his work total was on this high temperature
8 system, and he did, like Mr. Ferriter said, remember,
9 the removal --

10 THE COURT: No, no, I'm more focusing on the
11 time line. I didn't realize it was all going out to
12 1980 at some point.

13 MR. MCCOY: Right.

14 MR. MOORE: I'm objecting. This is a total
15 surprise.

16 MR. MCCOY: This is not --

17 THE COURT: Wait. It's his time.

18 MR. MOORE: Liability cuts off in 1967 under
19 any circumstance.

20 THE COURT: Right. You can't go past '67 on
21 this.

22 MR. MCCOY: Judge, this is part of the
23 causation.

24 THE COURT: No. No. '67. You can frame it as
25 a '67 hypothetical. That's it.

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1 MR. MCCOY: Okay.

2 THE COURT: Do you understand?

3 MR. MCCOY: Okay.

4 (End of side bar discussion at 10:22 a.m.)

5 BY MR. MCCOY:

6 Q Okay. I'm going to withdraw and change that last
7 set of assumptions. I want you to assume that
8 Mr. Bushmaker had -- did repair and maintenance work
9 starting in 1956 and continuing through 1967 and that
10 about 25 percent of his time in that period was working
11 on a high temperature water system and that the work
12 required removing and reinstalling asbestos-containing
13 Philip Carey block and insulation.

14 Do you have an opinion to a reasonable degree of
15 scientific and medical certainty about whether such
16 exposures contributed or I should say were a cause of
17 Mr. Bushmaker's lung cancer and asbestosis?

18 A I do have such an opinion and my opinion would be
19 that those exposures also would have been part of his
20 overall cumulative exposure that gave rise to both his
21 asbestosis and to his lung cancer.

22 Q And Dr. Frank, if a person -- specifically we'll
23 just use Mr. Bushmaker -- if Mr. Bushmaker had inhaled
24 asbestos fibers from other sources than the Philip Carey
25 products, would those exposures also have been a cause

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1 of his lung cancer and asbestosis?

2 A Yes, they would have been. There's no way the body
3 knows that it's a Philip Carey product or somebody
4 else's product. It responds to the exposures to
5 asbestos. So again, the cumulative exposures, both from
6 Philip Carey products as well as other products, would
7 have been contributory.

8 MR. MCCOY: I have a few more questions on this
9 line, Judge, and then probably if you want, then after
10 that I probably have another half hour or so or 45
11 minutes I think.

12 THE COURT: Okay. Well, let's --

13 MR. MCCOY: Tell me when to stop.

14 THE COURT: No, thank you for that. Let's
15 finish this line of questioning, then we'll see if the
16 jury is ready for a break and I'm thinking the answer is
17 probably yes. But let's get there from here.

18 BY MR. MCCOY:

19 Q All right. We've talked in these hypotheticals,
20 I've asked you to assume a couple different scenarios;
21 one involves the installation of these products, pipe
22 covering block. I also asked you to assume another
23 scenario about the removal and reinstallation of those
24 products. Have you studied articles that involve both
25 these types of situations?

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1 A Yes, and I've spoken to people who have done both
2 kinds of work.

3 Q Can you just tell us in terms of assessing
4 causation what differences there are, if there are any,
5 in terms of the original application of these materials
6 versus the removal and reinstall?

7 A As far as the body knows, there's no difference.
8 The fiber is one that is being put in place and escapes
9 and gets inhaled by somebody or comes from removal
10 activities. Again, the body doesn't know or care about
11 what brand it is; if it was going in; if it was coming
12 out; what product it came from. The body will respond
13 to asbestos, no matter what the source, name of the
14 company or activity that released the fibers.

15 Q When you're talking -- when you talk about
16 bystander exposures and causation, if a person is within
17 20 feet of this type of activity application of block
18 and pipe -- of block and cement insulations, has that
19 been studied in terms of the causation issue?

20 A Yes.

21 Q And what's been determined in the scientific
22 literature in that type of scenario?

23 A Well, it's been shown, depending upon the setting,
24 depending on how the asbestos is handled, it can travel
25 feet, it can travel hundreds of feet, it can travel

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1 hundreds of miles. There's a band application process
2 we use to spray asbestos in this country onto buildings
3 and there was a study that was shown that when -- it was
4 actually the World Trade Center was being built in
5 New York and they were spraying asbestos, they detected
6 it in the air over Boston. So that was 300 miles as the
7 crow flies. The material certainly can spread and it
8 certainly can spread 20 feet.

9 Q When the asbestos spreads, is it always going to be
10 visible?

11 A No. Most of the time, most of the time asbestos
12 fibers are not visible. They're not visible to the
13 naked eye. It's only under extraordinary circumstances
14 that you'll see dust from an asbestos-containing product
15 or anything. You have to have very high amounts before
16 you'll actually see them. Most dusts, be it coal dust,
17 silica particles, asbestos fibers, anything, you won't
18 see. But they can be in the air and they can be there
19 in a significant amount.

20 Q And I think the question I have on that then is if
21 you see visible dust from asbestos materials being used
22 like block and cement insulations, is that all the
23 asbestos fibers that are in the air or what you can see?

24 A No. There will be materials you can't see and
25 those materials could be used when you don't see it and
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1 you still could be exposed to a significant amount of
2 material. When you see it, it just tells you that
3 there's generally an extraordinarily large amount of
4 dust. Depending on the concentration of the asbestos in
5 the product, some percentage of it will be asbestos.

6 MR. MCCOY: That concludes this line of
7 questioning, Judge.

8 THE COURT: Okay. We've been going about 90
9 minutes. Why don't we take our usual 15-minute break.
10 We'll start somewhere between, oh, 20 to and quarter to.
11 All right.

12 (Jury excused from courtroom at 10:27 a.m.)

13 THE COURT: Everyone please be seated. Doctor,
14 you're still on the stand. Actually you're not. So
15 you're free to take a break as well, but because you're
16 technically on the stand, please do not talk to the
17 lawyers or the lawyer's team about your testimony while
18 on break. Understood?

19 THE WITNESS: Yes, sir. Thank you.

20 THE COURT: All right. I don't have anything.
21 Mr. McCoy, anything before the break?

22 MR. MCCOY: Not right now, but I do want to
23 make a further record on that one ruling we got. I
24 heard Your Honor, but I would -- I do want to make a
25 further record on that.

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1 THE COURT: As you wish. Do you want to do it
2 now?

3 MR. MCCOY: I don't -- I need to think about
4 that point just to present something to Your Honor, so
5 it doesn't need to be right now.

6 THE COURT: Fine. But if you want me to
7 reconsider the ruling, it's got to be before Dr. Frank
8 is done because otherwise the damage is done from your
9 perspective.

10 MR. MCCOY: I understand.

11 THE COURT: Mr. Moore, anything else then
12 before the break?

13 MR. MOORE: No, sir.

14 THE COURT: All right. You guys get 15 as
15 well.

16 (Recess 10:28-10:44 a.m.)

17 THE COURT: Let's bring in the jury here,
18 please.

19 (Jury brought in courtroom at 10:46 a.m.)

20 THE COURT: All right. Everyone please be
21 seated. Ladies and Gentlemen, welcome back. The doctor
22 is ready. Mr. McCoy, why don't we continue, please.

23 MR. MCCOY: Thank you, Judge.

24 BY MR. MCCOY:

25 Q Dr. Frank, you've already explained about what
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1 asbestosis is. Can that disease be cured?

2 A No. It is an incurable disease. Once the scar
3 tissue forms, it's there forever.

4 Q What are the long-term effects that can be caused
5 by asbestosis as the disease progresses?

6 MR. MOORE: Objection, Your Honor. Lack of
7 foundation. Calls for speculation in the case of
8 Mr. Bushmaker.

9 THE COURT: Do we need to go side bar on this,
10 Mr. McCoy?

11 MR. MCCOY: I'd like to go ahead and ask that
12 question if we need to, Judge.

13 THE COURT: Yeah. I guess I just need a little
14 more background, so let's go side bar.

15 (Discussion at side bar at 10:47 a.m.)

16 THE COURT: Okay. So why don't you give me a
17 little bit more detail on lack of foundation here.

18 MR. MOORE: Sure. I mean he's asking -- it's a
19 prejudicial question because he's asking what can be the
20 long-term side effects of asbestosis was the question as
21 I understood it. Now he's going to try to use that to
22 say that that's the situation with Mr. Bushmaker and
23 that's not within the report and it's not a claim that
24 I've seen in this case and -- nor evidence of. You
25 can't see that he -- you can't draw the inference in

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1 front of the jury that that's going to be the situation
2 here. That's unfair to us.

3 THE COURT: Okay. Mr. McCoy.

4 MR. MCCOY: That wasn't how I was planning to
5 use it, Judge, because what I'm directing this at is in
6 opening statement Mr. Moore said that Mr. Bushmaker did
7 not have asbestosis anymore because there was something
8 on the 2012 CT scan. That's what I'm directing it at.

9 THE COURT: I know that you did mention during
10 opening that he's now cleared. But again, I thought
11 this case was about cancer, not about asbestosis. I'll
12 let you ask it and get an answer as one question, but
13 then let's move on. Okay?

14 (End of side bar discussion at 10:49 a.m.)

15 BY MR. MCCOY:

16 Q Dr. Frank, what are the longer term effects that
17 can be caused by asbestosis as that disease progresses?
18 And I'm talking about within the lung.

19 A When someone has asbestosis, basically two things
20 can happen. It need not progress. Not every case
21 progresses. And then somebody will be left with
22 whatever their pulmonary condition is at that time. On
23 the other hand, if it progresses, someone will end up
24 being more and more short of breath, limitations of
25 their activities will occur, and ultimately if it gets

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1 bad enough, it can cause death.

2 Q If the jury was told in opening statement by
3 counsel for Rapid-American that Mr. Bushmaker did not
4 have asbestosis based on a 2012 CT scan, would you agree
5 based on your review of the medical records and
6 knowledge of the disease?

7 A No. I've seen two 2012 CT scans and both of them
8 speak to the extensive calcified pleural plaques; make
9 no mention one way or the other of parenchymal changes.
10 There's no way that his asbestosis, pleural asbestosis
11 or whatever didn't exist anymore in 2012. It's a
12 disease that doesn't go away once you have it.

13 Q Just in reference to this one medical record which
14 was June 12, 2012, and it makes -- this is from the
15 Marshfield Clinic in Marshfield -- this makes a
16 statement under here of findings and it says "Additional
17 linear areas of scarring are noted at the lung bases."

18 A That is entirely consistent with his diagnosis of
19 asbestosis and certainly it speaks just before that of
20 his calcified pleural plaques. It certainly was evident
21 and present in 2012.

22 Q Thank you. Have you published papers, Doctor, on
23 the combination of tobacco and asbestos exposures?

24 A I have.

25 Q Okay. Can you tell us when you first did that or
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1 an example of one that's significant in connection with
2 the circumstances of this case?

3 A I think the first time I published on that would
4 have been 1979. It was a paper in the Annals of the
5 New York Academy of Sciences.

6 Q What did you conclude in that research that was
7 published back then?

8 A I was looking at the data that existed at the time
9 and basically it had to do with the interaction and the
10 synergism of tobacco and asbestos. It showed that
11 asbestos by itself could cause lung cancer; smoking
12 certainly by itself can cause lung cancer, and that the
13 two together could cause even more lung cancer, many
14 times more.

15 There's also data in there or discussions in there,
16 because there was information from the insulators that
17 Dr. Selikoff worked with and had us work with him on
18 that if you could get somebody to give up cigarette
19 smoking, that greatly increased risk of the combination
20 materials would go down over time and that actually over
21 time you were left with the risk of just the asbestos
22 without the cigarettes.

23 So there certainly is this synergistic effect, but
24 as we've already discussed specifically in the case of
25 Mr. Bushmaker, his tobacco use stopped many years ago.

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1 Q You had mentioned something earlier about cigarette
2 smoke and the removal or clearance of the carcinogens
3 from the lung over time.

4 A Yes.

5 Q Okay. Can you explain what you mean by that?

6 A There are literally hundreds of compounds in
7 cigarette smoke; about -- it varies whose data you look
8 at, but somewhere around 40 of them are cancer-causing
9 agents. They're so-called carcinogens. Most of them
10 are what we call *polycyclic aromatic hydrocarbons*. It's
11 a fancy term for carbon rings with hydrogens sticking
12 off them, sometimes multiples of these rings. These are
13 relatively easily metabolized in the body and it's
14 actually the metabolite in some cases that is the
15 cancer-causing agent, not the original compound.

16 For someone who gives up cigarette smoking, once
17 they've smoked their last cigarette and the body has
18 metabolized these compounds into other related
19 compounds, they've now perhaps stuck a sulfur group on
20 or some other ways the body deals with this, they get
21 excreted from the body and they're not there anymore.

22 Another example of a carcinogen that doesn't stay
23 around is radiation. If someone gets a big dose of
24 radiation, it goes through their lungs, comes out the
25 other side. It may have done damage while it was there,

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1 but the body also has mechanisms whereby it can repair
2 certain amounts of cell damage.

3 So the carcinogen doesn't need to hang around, but
4 the longer you go without exposure to that carcinogen
5 that doesn't hang around, the less and less likely that
6 it has any effect. On the other hand, as we've already
7 spoken, asbestos will hang around for the rest of your
8 life.

9 Q Doctor, what is COPD?

10 A COPD is sort of a catch-all phrase and it refers to
11 *chronic obstructive pulmonary disease*. What it means is
12 someone is having some difficulty in exhaling air.
13 That's what it means by obstructive. We take air in
14 relatively easily. Blowing it out is sometimes
15 difficult.

16 There are two diseases that generally fall under
17 the category of COPD. One is chronic bronchitis. Some
18 people will develop that disease and that will constrict
19 the airways. And then the other disease that will do
20 that is emphysema. Both of those have many causes.

21 Q Have you seen medical records after Mr. Bushmaker's
22 lung surgery which show emphysematis changes? Did I say
23 that right?

24 A Emphysematis. Yes, I did see such records in his
25 medical files.

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1 Q And what is an emphysematis --

2 A Emphysematis change?

3 Q Emphysematis change, yes.

4 A What happens, I described earlier today that the
5 lung is basically this collection of these literally
6 billions and billions of air sacs and they're all held
7 together with tissue. What happens in the case of
8 emphysema, these connections can break down and the air
9 sacs enlarge. So instead of having in the same space
10 maybe ten air sacs, some of them break down, you might
11 only be left with five. Over time if you lose enough of
12 them, you end up being short of breath because you don't
13 have enough ability to transfer the oxygen back and
14 forth. That's what goes on in these air sacs.

15 There are a number of causes of emphysematis
16 changes and I gave some consideration to that with
17 regard to Mr. Bushmaker.

18 Q That was my next question was to what do you
19 attribute the emphysematis changes --

20 MR. MOORE: Objection, Your Honor.

21 Q -- of Mr. Bushmaker?

22 MR. MOORE: Outside the scope.

23 THE COURT: If it's in the report, it's fair
24 game. If not, you've got to move on.

25 MR. MCCOY: I think it's in the report.
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1 THE COURT: Can you point to a page for
2 Mr. Moore? Doctor, you get a break now while they
3 exchange notes. Do we need to go side bar?

4 MR. MOORE: Yeah, I think so.

5 THE COURT: Let's do it.

6 (Discussion at side bar at 10:58 a.m.)

7 THE COURT: Okay. Wait, wait. Okay. So let's
8 clarify. The objection is?

9 MR. MOORE: That there's no statement in the
10 record that the COPD and emphysema that's been
11 referenced in the --

12 THE COURT: Post-surgery medical record.

13 MR. MOORE: Or in his report, in Dr. Frank's
14 report, makes no mention that the fact that those
15 emphysematis --

16 THE COURT: Emphysematis.

17 MR. MOORE: Yes -- changes are due to anything
18 other than -- well, he doesn't even make mention of it.

19 THE COURT: Where are you going with this?
20 What's he going to tell you, Mr. McCoy?

21 MR. MCCOY: He's going to describe what he
22 thinks would be the causes of the changes.

23 THE COURT: Okay. And is that in his report?

24 MR. MCCOY: It's not specific to those --

25 THE COURT: Then it's not coming in.
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1 MR. MCCOY: Judge, it's in --

2 THE COURT: Okay? Point to the page in the
3 report. Show me his report.

4 MR. MCCOY: It was raised in his opening
5 statement.

6 THE COURT: No. Show me in the report. If he
7 made a statement -- let's be clear.

8 MR. MCCOY: He's got this statement here --

9 THE COURT: Is this his report?

10 MR. MCCOY: -- about smoking. They want to say
11 it's related to smoking, the emphysematis changes. He
12 has said it's not. It's in his report.

13 MR. MOORE: No. He says it's unclear.

14 MR. MCCOY: But that's --

15 THE COURT: Okay. Wait, let me just read it.
16 You're pointing to the sentence that begins "Given the
17 long hiatus..." Okay. But that's got nothing to do
18 with emphysematis conditions.

19 MR. MCCOY: Well, it is in the sense that it
20 directly has to do with this case because we've been
21 told in opening statement that these emphysematis
22 changes are something caused by cigarette smoking. His
23 report says --

24 THE COURT: Okay. Wait. You can ask him, and
25 I want you to lead him, do you think these changes were
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1 caused by his cigarette smoking.

2 MR. MCCOY: Okay.

3 THE COURT: And I think his answer is it's
4 unclear that they were, so he does not think so, if I'm
5 reading that correctly. You can ask him that. In fact,
6 if you just want to read his report statement to him --

7 MR. MCCOY: I'll ask him the question and he
8 can cross.

9 MR. MOORE: I object to that question. I think
10 it's --

11 THE COURT: No, let's do this. Let's do this.
12 The report says what it says. Why don't you just show
13 him the report and read the sentence and say is that
14 your statement in the report. Okay?

15 MR. MCCOY: I need to relate it to the
16 emphysematis changes.

17 THE COURT: No, you don't. You read the
18 report. Period. Got it? His report says what it says.
19 You're trying to extrapolate beyond that. You can't do
20 that. You can read what he says in the report because
21 that's his testimony. If you want to argue from that
22 later, you can. But you can't ask him a new opinion
23 that isn't in the report. Okay?

24 MR. MOORE: We've gone way beyond. This on
25 several topics, but I'm allowing some leeway here.

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1 THE COURT: I understand. And I haven't read
2 the reports, but the fairest thing to do is simply have
3 him read the report.

4 MR. MCCOY: There's no medical doctor for
5 Rapid-American to testify about any of these matters.

6 THE COURT: I've ruled.

7 MR. MCCOY: If that's true --

8 THE COURT: Stop. I've ruled.

9 (End of side bar discussion at 11:01 a.m.)

10 BY MR. MCCOY:

11 Q Doctor, I'm just going to go ahead and show you a
12 copy of your report in this case. You may have it
13 already.

14 A I do.

15 Q Okay. If you can find that.

16 A Maybe just --

17 THE COURT: If you want to share a copy, that's
18 fine. Mr. McCoy, if you just want to point him to the
19 sentence that we're talking about, that would be fine.

20 Q Right. Okay. I'd like to direct your attention to
21 this one sentence right here.

22 A Yes. Okay.

23 Q Okay. And I'd like you to just read that sentence,
24 if you would, to the jury from your report.

25 A Sure. I wrote in my report, "Given the long hiatus
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1 from smoking and the fact that he had not smoked
2 cigarettes since the 1940s, it is unclear what role, if
3 any, his prior tobacco use played in developing his lung
4 cancer."

5 Q And that's still your opinion today?

6 A Yes, sir.

7 Q Dr. Frank, have you studied the historical
8 scientific literature about the health risks of
9 asbestos?

10 A Yes.

11 Q Have you personally contributed to this literature?

12 A Yes, I have.

13 Q Give us an example of your contributions to that
14 literature.

15 A That's the book chapter that I referred to earlier
16 on the *History of Uses of Asbestos*, and it goes back
17 actually probably several thousand years because the
18 Romans knew of the hazards of asbestos. But that's not
19 the modern story of what asbestos could do to people.

20 Q Based on your review and understanding of the
21 history of the literature, when were the dangers of
22 asbestos first reported in the medical literature?

23 A The first significant report that is usually cited
24 was a government publication in Great Britain. It was
25 1898. Her Majesty's Inspectorate of Factories spoke

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1 with the hazards of asbestos, and shortly thereafter,
2 Dr. Montague Murray wrote that -- because the hazards of
3 asbestos that were now better appreciated, they didn't
4 expect to see so much disease as they had seen
5 previously. Unfortunately he wasn't correct.

6 Q All right. And you've selected some references
7 today that you were going to talk to the jury about and
8 gave me a list of what they were.

9 A Yes, sir.

10 Q Okay. I'm just going to go through these
11 one-by-one. I'll give you the name and you can tell me
12 what the significance of that particular piece of
13 literature is --

14 A Yes.

15 Q -- to the historical knowledge of the dangers of
16 asbestos in the literature. The next -- you talked
17 about Montague Murray, and that was published in 19 --

18 A That was 1907, the quote, the famous quote of his
19 now that -- I'm paraphrasing, of course, that the
20 disease was understood and wouldn't occur, as he put it,
21 so often as heretofore.

22 Q Okay. The next publication that you mentioned to
23 me was by Collis. C-o-l-l-i-s.

24 A Right. He was --

25 Q 1915?

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1 A Right. He wrote some papers in 1915 on what had
2 been called by then *pneumoconiosis* or *dust diseases of*
3 *the lung*. That had been a phrase coined by a German
4 pathologist in 1867. And he wrote a paper in 1915 about
5 the hazards both of silica and about asbestos and the
6 changes that it could cause in the lung.

7 Q And the next publication that you mentioned to me
8 is by Cooke in 1924?

9 A The fact that asbestos could cause disease was
10 appreciated prior to Cooke, but he gave the term to the
11 disease asbestosis. He's the first one in a paper in
12 1924 that spoke to and used the term asbestosis. He was
13 a British physician and wrote using that term in 1924.

14 Q And the next publication that you mention in my
15 list is by Meriwether. 1930.

16 A Meriwether and Price. Dr. Meriwether was a
17 physician. Mr. Price was an industrial hygienist. That
18 was about a 70 or 80-page document that they wrote. It
19 was also in Great Britain. And there were a number of
20 important points in that particular article. I'll just
21 sort of tick them off for you.

22 Basically what Meriwether and Price wrote was men
23 can get asbestos disease; women can get asbestos
24 disease. You can get it from different products. They
25 talked about different materials that people were

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1 exposed to that contained asbestos.

2 They made a very telling comment in there. They
3 said workers who are exposed to hazardous materials
4 should be educated about the hazards of the materials
5 that they're working with so they can participate in
6 helping to protect themselves. They talked about, when
7 dealing with asbestos, that you needed good ventilation
8 to reduce the amount of dust that workers would be
9 exposed to. And they even carried it one step further.
10 They said if you can't provide good ventilation, you
11 need to give workers respirators. This was all written
12 about in 1930.

13 So Meriwether and Price wrote what I personally
14 consider sort of the fairly seminal paper about the
15 hazards of asbestos and how to prevent them.

16 Q The next authors that you mentioned in the list to
17 me were Lynch and Smith. 1935.

18 A Doctors Lynch and Smith were two physicians in
19 South Carolina. They saw workers who came to them from
20 an asbestos textile plant. They didn't definitely write
21 this, but they said we're seeing -- one has to remember
22 that in 1935, lung cancer was a very uncommon disease.
23 Very rare.

24 MR. MOORE: Objection, Your Honor. I don't
25 think he can put his gloss on this. I think he can say
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1 what was written.

2 THE COURT: We'll give him some leeway. I'm
3 not going to stop him.

4 MR. MOORE: Okay.

5 THE WITNESS: They were looking after workers
6 who worked at the asbestos textile plant. They were
7 seeing cases of asbestos-related lung disease and they
8 suggested that they were seeing excess cases of lung
9 cancer and that they thought it might be related to the
10 exposures to asbestos that these workers were having.

11 BY MR. MCCOY:

12 Q The next author that you had asked me to put on the
13 list is Hueper. H-u-e-p-e-r. In 1942.

14 A Wilhelm Hueper was head of Occupational Cancer
15 Studies at the National Cancer Institute, the same place
16 I went to work at decades later. He wrote a textbook.
17 It was published in 1942 called *Occupational Tumors and*
18 *Allied Diseases* and in there he specifically wrote that
19 he considered asbestos to be a cancer-causing agent of
20 lung cancer. That was in his role as head of
21 Occupational Cancer Studies.

22 Q And the next publication that I've noted here is
23 one from the Journal of the American Medical Association
24 in 1949.

25 A The Journal of the American Medical Association was
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1 and probably still is the most widely read medical
2 journal in the United States and they wrote about the
3 hazards of asbestos in 1949, including the fact that it
4 caused lung cancer.

5 Q What else was covered in that article in 1949? Was
6 it a study of cases or --

7 A It was a review of some cases and the fact that
8 cases had been collecting during the 1940s with regard
9 to lung cancer, showing up in individuals who had been
10 exposed to asbestos.

11 Q And another article that you had put on the list
12 then was by Doll in 1955?

13 A Richard Doll was a medical physician, medical
14 epidemiologist in Great Britain, and in 1955 he did and
15 reported on the first epidemiological study of lung
16 cancer being caused by asbestos. Prior to that, there
17 had been these reports. There was enough information
18 for Hueper to call it a carcinogen. But in 1955, he
19 reported that in an asbestos textile factory that he
20 looked at, he looked at something over 100 deaths. He
21 expected that there would have been 4 percent of the
22 deaths from lung cancer. All of these patients or
23 individuals had had autopsies. What he found was that
24 instead of 4 percent, there was 17 percent of the people
25 had died of lung cancer, and so he again, added to the

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1 literature with his epidemiological study that asbestos
2 was a cause of lung cancer.

3 Q And after Mr. Doll or after Sir Richard Doll's
4 publication in 1955, was there other articles published?

5 A There have been at this point following that, there
6 were hundreds of articles about lung cancers and all the
7 other diseases we talked about; I mean literally
8 thousands of papers published about the hazards of
9 asbestos following that time frame.

10 Q Okay. I'm going to stop with Sir Richard Doll.
11 We've covered enough so far. If a company making
12 asbestos products has claims by employees who worked in
13 production areas for asbestos diseases, is this
14 important from an occupational medicine perspective to
15 protecting persons working in the field with the same
16 products?

17 MR. MOORE: (Stands)

18 THE COURT: Wait, wait. I think we've got an
19 objection.

20 MR. MOORE: Yes. Same objection as I
21 previously stated at side bar. The four corners issue.

22 THE COURT: Okay. Is this part of the report?

23 MR. MCCOY: No, Judge. It's not specifically
24 stated.

25 THE COURT: Okay. Like we discussed, you may
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1 ask Dr. Frank about those things that he put in his
2 report, but otherwise we've got to move on. Okay?

3 MR. MCCOY: All right.

4 BY MR. MCCOY:

5 Q Dr. Frank, again addressing the history of the
6 knowledge of the hazards of asbestos, did some of the
7 government agencies in Wisconsin take steps to regulate
8 asbestos before 1960?

9 A Yes, they did.

10 Q Can you describe for us what actions were done?

11 A Well, there are reports from the Industrial
12 Commission of Wisconsin. There's a report from 1932 on
13 the effects of dust upon the respiratory system. In
14 that document they speak to cases of asbestosis in 1932,
15 and then went ahead and started regulating these either
16 in the 30s or early 40s.

17 Q Were regulations actually enacted by Wisconsin?

18 A Yes. The Industrial Commission did put in place
19 regulations for asbestos.

20 Q What about in Ohio where Philip Carey was based?

21 A Similarly they too had studied this as a problem
22 and put in place regulations. I think that would have
23 been in the early 1940s to regulate exposures to
24 asbestos at workplaces.

25 Q Are you familiar with something called the *standard*
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1 of five million particles per cubic foot for asbestos
2 exposure?

3 A I am.

4 Q Is that what was adopted early on in the
5 regulations?

6 A Yes. Early on the regulations called for, as it
7 says, five million particles per cubic foot. A cubic
8 foot is a block of air that's a foot on each side.

9 Q Where did that standard come from?

10 A That came from the limited amount of information
11 that was available at the time. There were a number of
12 studies that were carried out looking at how much
13 exposure could be thought to be documented and did it or
14 did it not give rise to disease.

15 Q Was this standard intended for protection against
16 persons getting lung cancer from asbestos?

17 A No, it was not. It was a standard used to protect
18 against asbestosis.

19 Q What's your basis for saying that?

20 A Because that's what the standard was designed for,
21 and others recognized that. There was the writings of
22 Dr. Stokinger. Herbert Stokinger worked at -- well,
23 NIOSH didn't exist. Then the predecessor to NIOSH, the
24 government agency in Cincinnati. I actually met him.

25 But in 1956 before I got started in this, he
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1 actually wrote that when dealing with workplace levels,
2 if you're dealing with a cancer-causing agent, you
3 should have a level that was 100 or even 500 times less
4 than what you allowed for the diseases that were being
5 controlled that were not cancer. So he was looking --
6 and he recognized that the standard that was in place
7 was to prevent asbestosis, even though it turned out
8 that that was not a sufficient standard.

9 Q Turned out later?

10 A Yes.

11 Q Can persons with exposures less than five million
12 particle per cubic foot still get asbestos disease?

13 A Yes.

14 Q Can you explain that?

15 A Well, again, it varies -- first of all, five
16 million particles per cubic foot, which is not the
17 measurements we use today. Now we use something called
18 *fibers per cc* and a cc is the size of a sugar cube
19 roughly instead of a cubic foot. Now we're down to a
20 tenth of a fiber per cc as a legally allowable standard,
21 but it still is not considered safe. When the
22 government set that standard, they didn't call it safe,
23 they said it's legally allowable.

24 But if you look back, people with far less than --
25 well, with less than five million particles per cubic

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1 foot got the disease, and there's even discussions in
2 the scientific literature at the time saying that some
3 people didn't think that this was protective.

4 Q At the time meaning back in?

5 A In the 40s. 50s.

6 Q When it was adopted or written by the governments?

7 A Yes.

8 Q Does the term *individual susceptibility* have a
9 meaning to you, Doctor?

10 A It does.

11 Q In the context of asbestos disease?

12 A It does.

13 Q What does that mean?

14 A Well, with any exposure, not everybody who gets
15 exposed is going to get disease. Even among asbestos
16 insulators who have the highest exposure of any group
17 that we know, I will tell you that after, let's say, 30
18 years of working in the trade, *only* 94 percent of them
19 end up with asbestosis. I'm being a little facetious of
20 course, but there's 6 percent of people with the same
21 exposures day in and day out don't get the disease. We
22 really don't know why. We'd like to know because if
23 there's some factor or something that we could do to
24 protect other people, we'd like to make use of it.

25 We certainly know that not everybody gets lung
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1 cancer. Some people get lung cancer. Some people get
2 mesothelioma. Some get the other cancers. We don't
3 know ahead of time and cannot predict which individual
4 is going to get which disease. And that is why, of
5 course, you end up protecting everybody so that nobody
6 gets disease or very few people.

7 The reason some people do or don't get disease, we
8 don't understand all of it, but some of it appears to
9 have to do with immunologic status. It may have to do
10 with diet a little bit. It may have to do with your
11 basic genetics. We know there are certain genes that
12 dispose you to cancer. That doesn't mean you're going
13 to get cancer if you have the genes, it just means that
14 if you're exposed to the cancer-causing agent, you're
15 going to be more likely to get it. So you still have to
16 be exposed. Just having the gene isn't enough.

17 So there are all of these factors, but we never
18 know ahead of time. The state of medical knowledge is
19 not such that we can predict who will and who won't get
20 disease.

21 Q Those persons who get it are the susceptible ones?

22 A Yes.

23 Q Is that the goal of occupational medicine, to
24 protect the susceptible persons?

25 A To protect everybody. The ones that are
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1 susceptible; the ones that are less susceptible. You
2 don't know that ahead of time. The whole goal is to
3 protect as many people as you can.

4 Q The goal of occupational medicine would be to
5 protect Mr. Bushmaker from having gotten that condition?

6 MR. MOORE: Objection, Your Honor.
7 Argumentive. Outside the scope.

8 MR. MCCOY: Judge, I don't have any further
9 questions.

10 THE COURT: That one is stricken. So with
11 that, let's turn the witness over.

12 MR. MCCOY: I do want to offer some proffers,
13 but that's fine for now.

14 THE COURT: As you wish.

15 MR. MCCOY: Okay. Thank you.

16 MR. MOORE: May I, Your Honor?

17 THE COURT: You may.

18 MR. MOORE: Again. May I sit here at counsel
19 table?

20 THE COURT: You may choose your spot.

21 MR. MOORE: And everyone can hear me okay?

22 Okay. Thank you. (11:20 a.m.)

23 CROSS-EXAMINATION

24 BY MR. MOORE:

25 Q Dr. Frank, you've never been the treating physician
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1 for Mr. Bushmaker; correct?

2 A Correct, Mr. Moore, I have not.

3 Q Had you met Mr. Bushmaker before yesterday?

4 A No, sir.

5 Q You were hired by Mr. McCoy to look at this case;
6 correct?

7 A Yes. By his firm.

8 Q And you've done a lot of cases for Mr. McCoy and
9 his law firm; correct?

10 A I don't know what you mean by *a lot of cases*. I've
11 worked with his firm probably about ten years or so.
12 I've done a number of cases. There's other firms I've
13 done fewer and some I've done more with.

14 Q You talked about, I believe in your direct
15 testimony speaking with Mr. McCoy, about the number of
16 depositions and trial testimony you've given. Isn't it
17 true that your testimony has been 99 percent for
18 plaintiffs?

19 A That's probably accurate, yes.

20 Q Okay. And in this case --

21 A In asbestos litigation. In other areas it's been
22 more balanced.

23 Q Okay. And as part of your report in this case, you
24 submitted a list of your testimony that you've given in
25 prior litigation; correct?

ARTHUR FRANK - CROSS

1 A Yes, sir.

2 Q And I mean this is -- for the record this is
3 Exhibit 2752 -- and this would be legal cases with
4 deposition or trial appearance by Arthur L. Frank, M.D.
5 That's you obviously?

6 A Yes, sir.

7 Q And this is your list of trial testimony and
8 deposition testimony?

9 A Since 1994, yes, sir.

10 Q Okay. And we can go through this. I'm skipping
11 lots of pages. But up to here, I mean they're full page
12 lines of cases. And it ends on page -- hold on. It
13 ends on page 42?

14 A Yes, sir.

15 Q And that -- this is actually not complete because
16 the last date on here is 8-25-11; correct?

17 A Correct. And I did some work obviously the rest of
18 that year and last year as well.

19 Q Yeah.

20 A It's an older version.

21 Q So the newer version would be another seven or
22 eight pages maybe?

23 A I don't know, two or three pages. I don't keep
24 track of it.

25 Q Okay. So more than a thousand times.

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1 A Yes.

2 Q And you've been retained by plaintiffs' attorneys
3 like Mr. McCoy for more than 2,000 times.

4 A I've looked at more than 2,000 cases over 35 years,
5 yes, sir.

6 Q In fact, in one year alone, you wrote over 500
7 reports for plaintiff's counsel, didn't you?

8 A In some years, yes.

9 Q And you've testified for more than 45 different
10 plaintiffs' law firms in this litigation; correct?

11 A I've never added them up, but it's a considerable
12 number.

13 Q Would you disagree with me if I said it was 45?

14 A No.

15 Q And you've testified in more than half of the
16 states in the United States for plaintiffs' counsel?

17 A At this point, yes.

18 Q And last I saw, you were charging \$400 an hour for
19 your time; now it's \$425, right?

20 A Yes.

21 Q In the last three years, you've charged between
22 \$350,000 and \$450,000 per year for your testimony on
23 asbestos litigation.

24 A That's the money that has come to the University
25 for doing all that work, yes, sir.

ARTHUR FRANK - CROSS

1 Q And collectively it's upwards of four million
2 dollars; correct?

3 A Over 35 years, yes, I'm sure it is.

4 Q And I know you've been asked these questions in the
5 past, Dr. Frank, but you're not a pulmonologist;
6 correct?

7 A Correct.

8 Q And you're not a radiologist?

9 A Correct.

10 Q You didn't see any films in this case at all, did
11 you?

12 A I read the reports. I did not see the original
13 films.

14 Q And again, you're not an industrial hygienist
15 either?

16 A Correct.

17 Q And you're not an expert in warnings, are you?

18 A I'm only an expert in those things the Court
19 designates me as an expert in. I have no special
20 knowledge or experience with warnings.

21 Q Okay. Thank you. And in addition to your reports,
22 you get your materials from the plaintiffs' counsel;
23 right?

24 A Yes.

25 Q And in this case, you haven't read Mr. Bushmaker's
ARTHUR FRANK - CROSS

1 deposition, sworn deposition testimony, have you?

2 A I did not.

3 Q You relied on the summary provided you by
4 Mr. McCoy; correct?

5 A Correct.

6 Q One thing you did -- you talked about the stuff you
7 have written in the past. You also were involved in a
8 publication for lawyers in litigation; correct?

9 A When I was a medical resident, one of my fellow
10 residents had a wife who worked for a medical legal
11 publishing house. Knowing that I was interested in an
12 academic career and that I did work going back to my
13 high school days on cancer, I was asked if I would write
14 a book for lawyers so they could understand something
15 about cancer. I figured lawyers are just as entitled to
16 learn about that as other people, so I agreed to write
17 such a book.

18 The book was initially about 600 pages. There are
19 some legal materials in there that I had nothing to do
20 with. I'm not a lawyer. I don't know about legal
21 materials. Those were added by the publishing firm. I
22 wrote about 600 pages of material and did that back in
23 1976.

24 Q And you had already worked for Mount Sinai or
25 excuse me, been in school at Mount Sinai from '68 to
ARTHUR FRANK - CROSS

1 what? '72?

2 A I was a medical student through '72. I was a
3 graduate student at the Mount Sinai campus of City
4 University where I got my Ph.D. until '77. When I wrote
5 that book, I had not yet done any work for any lawyers.

6 Q You were an M.D. at that time.

7 A I was.

8 Q Yeah. Right. And it was published by Matthew
9 Bender; right?

10 A Yes.

11 Q And that book also discussed how to present a case
12 for trial.

13 A That's legal material that were added by the
14 lawyers at the publishing firm. I had nothing to do
15 with that.

16 Q There was even a section in that book on how to
17 present Dr. Selikoff, your mentor, for trial; right?

18 A Which I didn't know existed until the book came
19 out, yes.

20 Q I've got to clear something up here because I'll be
21 honest with you, I don't know where you got some of the
22 information for your testimony today. In opening
23 statement, Mr. McCoy said that Mr. Bushmaker smoked
24 cigars up until around 1986. Okay?

25 Now did you get your information about
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1 Mr. Bushmaker's smoking history from Mr. McCoy?

2 A Initially I did. That's how I wrote my report,
3 which speaks to his smoking until about 1970. Then I
4 verified that with Mr. Bushmaker last night.

5 Q Okay.

6 A So Mr. McCoy may have misspoken or had
7 misinformation when he said '86. Mr. Bushmaker and his
8 family members do not recall his smoking past 1970.

9 Q Okay. Well, I mean we have some medical records
10 from Mr. Bushmaker's treating physicians and -- let me
11 just highlight this. This was the Marshfield Clinic and
12 he -- Doctor, or excuse me, Mr. Bushmaker apparently was
13 going in for surgery for his carotid artery disease. Do
14 you see that?

15 A I do.

16 Q And this date of service was 2000.

17 MR. MOORE: I'm sorry, folks. I'll get it a
18 little closer. Once I figure out how to use this, it'll
19 be great.

20 Q It was October of 2000 and he was in for an
21 endartarectomy?

22 A Endartarectomy.

23 Q That's to clear the carotid artery in your neck;
24 right?

25 A Yes, sir.

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1 Q As part of this, I mean don't you think these
2 doctors who are going to do -- this is a serious
3 surgery; correct?

4 A Any surgery is serious.

5 Q Absolutely. And this is one that's cutting on your
6 carotid artery; correct?

7 A Yes.

8 Q And this is from 2000 and you would expect
9 Mr. Bushmaker to give truthful answers to his treating
10 doctors about his health history, wouldn't you?

11 A Yes, depending on what the question was and where
12 the doctors got the information.

13 Q Sure. Well, do you have any reason to think that
14 they didn't get his history of tobacco use from
15 Mr. McCoy or anyone else?

16 A They wouldn't have gotten it from Mr. McCoy. They
17 might have gotten it from old medical records which may
18 or may not be accurate.

19 Q And this one, it says in No. 6, it says "History of
20 tobacco use. Patient is a former smoker of two cigars
21 per day for 25 years. Off tobacco for 12 to 15 years."
22 And then it says he's asystematic from a pulmonary
23 standpoint; correct?

24 A It says that. There are other parts of the
25 records. You know, you've pulled out one sheet that

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1 says he's been off of tobacco for 30 years. You know, I
2 think Mr. Bushmaker, it's my understanding, will be on
3 the witness stand in this very place under oath.

4 Q Well --

5 A Let him testify as to what his smoking history is.

6 MR. MOORE: Your Honor, I'm just asking answers
7 to my questions. That's all.

8 THE COURT: Sure. And Doctor, you know the
9 drill. Answer the question asked.

10 THE WITNESS: Yes, sir.

11 BY MR. MOORE:

12 Q So if we do the math here, which is pretty easy, if
13 you deduct 12 years ago or 12 to 15, you're talking 1985
14 to 1988; correct?

15 A If it's correct.

16 Q But that would be the correct math though; right?

17 A The math would be correct.

18 Q Okay. There is certainly no reason that you know
19 of that Mr. Bushmaker would not give the same or the
20 truthful answers to his physicians; correct?

21 A I wasn't there. I don't know if they asked him
22 that or if they took it from previous records. I have
23 every reason to believe that Mr. Bushmaker, as is the
24 case for most patients, will give honest answers to
25 their doctors.

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1 Q Sure. I would hope so. Because that's for their
2 care and treatment; right?

3 A Yes.

4 Q Right. Okay, here's an office note from December
5 18, 2006, and this is when he went in for his lung
6 cancer surgery; correct?

7 A Yes.

8 Q And there at the bottom this -- and I apologize.
9 For the court reporter, the exhibit we just looked at
10 was 2722A. Would you confirm that for me, Dr. Frank?

11 A Yes.

12 Q Okay. Now I'm showing you what's been marked as
13 Exhibit 2722B. Okay? Which is the pre-op report for
14 the lung surgery; right?

15 A Yes.

16 Q And it's dated December 18, 2006. And there under
17 past medical history No. 4 it lists "History of severe
18 COPD"; right?

19 A Well, at the same time he was going in for his lung
20 surgery, his --

21 Q I'm sorry. Is that what it says, Doctor?

22 A That's what it says. But it doesn't fit with the
23 rest of the data from that time.

24 Q It says "History of severe COPD."

25 A That's what it says.

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1 Q And on the next page of that same exhibit, No. 6,
2 it says "History of tobacco abuse"; right? No. 6 at the
3 top there, sir.

4 A Yes.

5 Q Sorry. And then under Social History, we have
6 another discussion here: "The patient is a retired
7 pipefitter. He denies any history of alcohol abuse. He
8 only drinks socially. Former smoker. Quit smoking 20
9 years ago. He smoked for about 20 years."

10 Did I read that correctly?

11 A You did.

12 Q And 20 years before 2006 would be 1986; right?

13 A Yes.

14 Q Just like Mr. McCoy told this jury.

15 A Right. If that is correct. The math is correct.

16 Q The math is correct.

17 A Yes.

18 Q Is centrilobular emphysema the one that's
19 associated with cigarette or tobacco smoking?

20 A It can be, and there are other factors that cause
21 it as well and factors in his past exposure history that
22 are causative of that as well.

23 Q In his -- this is a record from October 16, 2012.
24 Just about four months ago. This is what I was
25 referring to in front of the jury. No. 4, it lists --

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1 No. 4, centrilobular emphysema in Mr. Bushmaker;
2 correct?

3 A Correct. And based on the smoking history that I
4 have from Mr. Bushmaker, I would not think his smoking
5 history was the cause of that.

6 Q Please, Doctor, confine your answers to my
7 questions. And this is Exhibit 2723A; correct?

8 THE COURT: You're not showing it.

9 Q Oh, I'm sorry. Gosh. Okay. 2723A; correct?

10 A That's what it says.

11 Q And you can see there, yes -- there's no dispute in
12 this case that Mr. Bushmaker has asbestos-related
13 pleural disease. But it does say there, the treating
14 physician says "without evidence of
15 asbestosis/fibrosis"; correct?

16 A And the previous one you showed said a history of
17 asbestosis, so the internal records are inconsistent
18 with each other.

19 Q We just don't know from these records, do we?

20 A Well, that's if you go by the records. But I know
21 what I think he has.

22 Q You haven't seen any films though. You're looking
23 at the same records here; right?

24 A I'm looking at those records, I'm looking at the
25 radiology reports, I'm looking at the B-reader reports,
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1 and I'm making my own judgment.

2 Q But you haven't seen -- you have not seen one CT
3 scan or x-ray; correct?

4 A Correct.

5 Q So you're looking at the same records the jury is
6 looking at.

7 A Yes. Well, I probably got to see more records than
8 they're likely to see if you only show them selected
9 pages.

10 Q I suspect we don't want to have them see all of
11 those. You know, we can talk about this a lot. This is
12 Exhibit 2185A; correct?

13 A That's what it says.

14 Q And this is for service that was performed on
15 February 10, 2003. This is for his knee replacement
16 surgery. Do you see that?

17 A I do.

18 Q Okay. So again, he's going in for a knee
19 replacement surgery. Have you had a knee replacement
20 surgery, Doctor?

21 A No. I have a torn meniscus, but I haven't had it
22 repaired yet.

23 Q Okay. Suffice to say, it can be not a fun surgery
24 to go through; correct?

25 A No surgery is fun to go through.
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1 Q Exactly. So it's important again that we have the
2 correct social history before the surgery. And again --
3 and this is another medical provider. We have the
4 doctor who did the endarterectomy; we had the guy -- the
5 gentleman who's going to testify here who did the
6 lobectomy that Mr. Bushmaker had. Now this is a doctor
7 who did the knee surgery; right?

8 A He has a different history than the others. He
9 said 30 years of smoking; the others said 20 years of
10 smoking. And then there's a history you'll get from
11 Mr. Bushmaker.

12 Q Well, I'm -- come and circle around on that a
13 little bit, Dr. Frank. But I'm focusing more on when he
14 quit, because that's really the gist of this. I mean
15 you talked about there being a risk associated with lung
16 cancer from smoking that goes back 35 years to the date
17 of quitting. Remember that testimony on direct
18 examination?

19 A Yes, and they're talking about smoking cigars which
20 don't carry the same risk as cigarettes.

21 Q Please don't tell this jury that there's -- that
22 cigars are a safe form of tobacco.

23 A Oh, I wouldn't say they're safe and they certainly
24 could give you mouth cancer. But the increase in lung
25 cancer from cigars is far, far less than the risk from

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1 smoking cigarettes, especially if you don't inhale.

2 Q This document here says he quit smoking 17 years
3 ago. So that would have been 1986 again; right? If
4 this -- if this surgery was done in 2003.

5 A That's what the math would tell us.

6 Q Right. And 30 years of cigar smoking, you would
7 agree that's a significant smoking history of cigars,
8 even of cigars.

9 A Doesn't say how many; doesn't say if he inhaled;
10 doesn't say how much of the cigar he smoked.

11 Q Okay. Let's assume he smoked two cigars a day for
12 30 years. Is that a significant --

13 A Before it was 20 years, now it's 30 years. What
14 one do you want me to assume?

15 Q I want you to assume two cigars for 30 years.

16 A Okay.

17 Q That's a significant smoking history.

18 A Of cigars, yes.

19 Q Thank you. Now there are any number of carcinogens
20 in the environment; correct?

21 A Yes, there are.

22 Q Sunlight is a carcinogen?

23 A Yes, as a skin cancer.

24 Q I'm from Kansas City. I eat barbecue.

25 A That has carcinogenetic materials on it, yes.

ARTHUR FRANK - CROSS

1 Q Right. So when you talk about no safe level, that
2 applies to any carcinogen, whether it's sunlight or my
3 burnt ends that I like.

4 A Right. And you know about it and you're willing to
5 take the risk.

6 Q But it's all about dose; correct?

7 A Yes.

8 Q The higher the dose, the higher the risk. You have
9 a chart over there; right?

10 A Yes.

11 Q Now some fact checking that I did with Dr. Brody.
12 I apologize. I asked him some fact check questions that
13 I said in opening statement; confirm this with you, and
14 I think you already said it on direct examination. I
15 said in my opening statement that there were between 3-
16 and 4,000 different products that contain asbestos. I
17 was right; right?

18 A That's what I testified to. I guess we're both
19 right or we're both wrong.

20 Q Okay. You talked about a reference to the B-reader
21 report. You -- that's an examination that's given to
22 people by NIOSH; correct?

23 A Correct. And I took the exam once in 1983. I
24 didn't pass it. I've never taken it since. All of my
25 publications on readings of x-rays have been published

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1 in the scientific literature, but I'm not a B-reader.

2 Q That's correct. Because you didn't pass the test.

3 A Correct. Fifty percent of the doctors like myself
4 don't pass it the first time they take it and I decided
5 I knew how to read x-rays, I didn't have to take it
6 again.

7 Q You talked about some of the uses, 3- to 4,000
8 different uses of asbestos. Back in the 50s and 60s,
9 physicians who did heart surgery back then put asbestos
10 in the chest cavity; correct?

11 A And they occasionally caused mesotheliomas to occur
12 from that, yes.

13 Q So the doctors back then doing that surgery didn't
14 appreciate the harmful effects of asbestos that they
15 might have on humans; correct?

16 A Some doctors today still don't appreciate it. That
17 doesn't mean it's not known about or that they couldn't
18 know about it.

19 Q But these are sophisticated surgeons back in the
20 1950s and 60s doing heart surgery, packing asbestos in
21 the heart -- in the chest cavity of their patients;
22 correct?

23 A I have no idea how sophisticated they were. I have
24 no idea what they knew about asbestos.

25 Q Okay. But that's what they chose to do; right?

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1 A That's what they chose to do and they gave people
2 disease because of it.

3 Q Now from the 30s -- and certainly that wasn't their
4 intent at that time, was it?

5 A I would hope not.

6 Q Okay. From the 30s until the 70s, asbestos was put
7 into products because of its safety qualities; correct?

8 A Sometimes it was used because of safety qualities.
9 Sometimes it was used because it was useful for certain
10 things like filtering or making cement lighter. There
11 were lots of reasons people ended up using asbestos.

12 Q One of the main ones was to provide protection from
13 fire; correct?

14 A That was a use of asbestos materials.

15 Q And by the way, the first product warnings didn't
16 come out -- that were on products didn't even come out
17 until the 1960s; correct?

18 A I don't recall when the products --

19 Q Okay.

20 A -- came out.

21 Q You don't dispute that?

22 A I don't know about it. I don't know when the
23 warnings were first put on there. To this day some
24 companies don't warn about it.

25 Q In that Matthew Bender book that you talked about,
ARTHUR FRANK - CROSS

1 the one you did for the lawyers, you wrote the
2 following -- this was in 1976?

3 A Depends what I --

4 Q It was before --

5 A I wrote the first book in 1976. I then wrote
6 additional chapters. So depending on what you're
7 quoting, I'll tell you if I remember when I wrote it.

8 Q You wrote the following: "In many ways, modern
9 technology depends on this material." You're referring
10 to asbestos; correct?

11 A Yes.

12 Q "It is useful for insulation of both hot and cold
13 pipes. It is an excellent fireproofing material and
14 modern automobile brakes use millions of pounds of this
15 material." Did you write that?

16 A If it's in the book, I wrote it.

17 Q Okay. You don't deny you wrote that, do you?

18 A No. I don't recall writing it, but 600 pages, I
19 don't remember everything I wrote. But if it's in
20 there, I wrote it.

21 Q You weren't here for my opening statement
22 unfortunately because it was just a masterful piece of
23 litigation.

24 A And you probably would have asked me to step out
25 anyway.

ARTHUR FRANK - CROSS

1 Q But I talked about the forest and the trees, and I
2 want to talk about that a little bit with you,
3 Dr. Frank. You talked about these initial reports about
4 asbestos and the harmful effects that were being
5 discovered like in the factories in England, and in
6 particular the Meriwether report. Do you remember your
7 testimony in that report?

8 A My short-term memory still works.

9 Q Very well. The fact is is that in the Meriwether
10 and Price case, they were studying an asbestos textile
11 mill in England; right?

12 A Among other things. A lot of the paper has to do
13 with the textile mill. They were also talking about
14 making brakes.

15 Q But it was still in the production of these
16 asbestos materials; correct?

17 A Yes.

18 Q And invariably they were using raw asbestos fiber
19 to make these products; correct?

20 A Yes.

21 Q So the -- we have an understanding of this tree
22 here, the tree in 1930 with Meriwether and Price, that
23 was raw asbestos fiber in the manufacturing environment;
24 correct?

25 A Yes.

ARTHUR FRANK - CROSS

1 Q And you talked about Mr. or Dr. Hueper's book
2 *Occupational Tumors and Allied Diseases* from 1942;
3 right?

4 A I did.

5 Q Okay. And in that publication -- did I get it all
6 on there? This is -- I'm sorry, Doctor. This is the
7 book you're talking about; right?

8 A Yes.

9 MR. MOORE: It's *Occupational Tumors and Allied*
10 *Diseases* by C.W. Hueper for the record. This is, I
11 don't even see a page number -- it's page 400.

12 Q And Dr. Hueper wrote "The chief health hazard
13 consists in the inhalation of asbestos dust which is
14 produced abundantly during the preparation of the
15 mineral for the spinning process (purification and
16 removal of stony impurities) and during other phases of
17 the production and manufacturing processes of asbestos
18 and asbestos-containing goods." Right?

19 A That's what it says.

20 Q And so we're talking about asbestos in the
21 manufacturing process, the Meriwether and Price
22 scenario; right?

23 A That is most of whom was studied in those days, but
24 again, they understood about the hazards of that
25 material.

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1 Q In the manufacturing process. Now one document or
2 one study that you didn't mention when Mr. McCoy was
3 asking you questions was, in fact, a study of pipe
4 covering done by the U.S. Public Health Service in 1946.
5 You did --

6 A The Fleisher-Drinker report.

7 Q The Fleisher-Drinker report. You're familiar with
8 it. Very famous in the history of the state of the art
9 of asbestos knowledge. Fleisher-Drinker is a well-known
10 report; correct?

11 A Well-known and very flawed.

12 Q Unfortunately flawed.

13 A Yes.

14 Q Yeah. And let's take a look at this. This was
15 January of 1946 is when this was published. Is this the
16 journal in which it was published? Do you remember
17 that?

18 A I don't recall. I'm sure it is.

19 Q We'll just go over here.

20 A Yes.

21 Q "The health survey pipe covering operations in
22 constructing naval vessels." And we call it
23 Fleisher-Drinker, but the first author is Walter
24 Fleisher, the second one is Frederick Viles, Robert
25 Gade, and then Phillip Drinker. Who's Phillip Drinker?

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1 A He was a professor at Harvard at that time.

2 Q What was his specialty?

3 A I think it was industrial hygiene.

4 Q Similar to your --

5 A Pardon me?

6 Q You worked with industrial hygienists; right?

7 A I do.

8 Q Now, you've been shown this article I'm sure in
9 other cases. You're well familiar with it; right?

10 A Not for many years, but I have been shown it. I've
11 read it.

12 Q So these are -- now this is -- what's interesting
13 about this, Dr. Frank, is yesterday we got to see a
14 videotape done by the United States Government in 1945
15 or 1946, about the same time this article was written.
16 And it was showing -- have you seen that video before?

17 A No.

18 Q Okay. There's no discussion about any harmful
19 effects of asbestos in that video. Would that surprise
20 you?

21 A I don't know anything about it. I'm not sure if I
22 should be surprised or not --

23 Q Okay.

24 A -- or who made it or --

25 Q Okay. Let's just say it was done by the U.S.
ARTHUR FRANK - CROSS

1 Government to show pipe coverers how to do their jobs in
2 Navy ships. Okay?

3 A Okay.

4 Q It's an instructional video.

5 A Okay.

6 Q Okay? No masks. No nothing. Okay? So this paper
7 talks about the health effects of doing that exact same
8 work; right? This is what this Fleisher-Drinker report
9 does; right?

10 A Yes.

11 Q So --

12 A On ships.

13 Q On ships. Just like the video showed us yesterday.
14 That was one of the highest exposures of end-use
15 products that there has ever existed, right, on ships?
16 Insulators on ships.

17 A Insulators. Insulators in general. Pipe coverers
18 are up there as well.

19 Q And insulators on ships. Because -- it's so high
20 because there's very little ventilation in the hulls of
21 these ships; right?

22 A Right. Going against exactly what Meriwether and
23 Price said, you need good ventilation.

24 Q Apparently the American experience was not the same
25 as the one in Britain; correct?

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1 A Well, no. It was -- unfortunately it was very much
2 the same.

3 Q The first conclusion of this article is "The
4 character of the asbestos pipe covering industry on
5 board Naval vessels is such that conclusions drawn from
6 other asbestos industries such as textiles cannot be
7 applied." Did I read that correctly?

8 A You did.

9 Q And textiles, they're talking about the Meriwether
10 or Price or the Driessen article that you talked about;
11 correct? Did you talk about Driessen?

12 A No.

13 Q Okay. Same conclusion in Driessen.

14 A Yes. Back in '38.

15 Q Right. And in fact, 1938 is when they came up with
16 the five million particles per cubic foot TLV that was
17 eventually adopted by the American Conference of
18 Industrial Hygienists; correct?

19 A American Conference of Governmental Industrial
20 Hygienists.

21 Q I left the "G" out.

22 A You did.

23 Q Okay. The American Conference of Governmental
24 Industrial Hygienists. The ACGIH.

25 A Right.

ARTHUR FRANK - CROSS

1 Q And the ACGIH was a group of state, federal, local
2 health professionals who were interested in promoting
3 the health in the workplace; correct?

4 A Even though it had the term governmental, not
5 everybody was a governmental employee. But they were
6 basically industrial hygienists who then and even today
7 still put out recommended levels.

8 Q Right.

9 A That was their recommended level then.

10 Q And five million particles per cubic foot, the same
11 limit that was adopted here in Wisconsin, the same one
12 that was adopted in Ohio, and that remained the
13 threshold limit value up until the late 1960s; correct?

14 A I don't keep up with all the regulations. I don't
15 know when they changed over.

16 Q Is that fair though? At least into the 60s; right?

17 A Presumably.

18 Q Yeah. And then the last conclusion, back to the
19 Fleisher-Drinker report, it says, "Since each of the
20 three cases of asbestosis had worked at asbestos pipe
21 covering and shipyards for more than 20 years, it may be
22 concluded that such pipe covering is not a dangerous
23 occupation." That's what was said in 1946; right?

24 A That's what they said and I certainly wouldn't have
25 written the same statement. And the fact that they let
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1 go just before the study most of the people who had
2 worked for 20 years and missed most of the disease is
3 part of the problem with that paper.

4 Q But it is what was out there in the knowledge for
5 folks to learn about if they were interested about the
6 potential hazards of asbestos in use products.

7 A And there was lots of other material about asbestos
8 out there as well, including --

9 Q I'm talking right now about the pipe covering
10 insulation trade.

11 A Well, there was information about plumbers as well
12 that was out there that were end-users who got disease.

13 Q Now one of the most important things that
14 Dr. Selikoff did was, in 1964, was find out that that
15 conclusion, their No. 4, was not correct; right?

16 A He wasn't the first one to find that out, but he
17 certainly publicized that and in 1964 wrote that
18 asbestos is no respecter of trade.

19 Q And the fact of the matter is that Dr. Selikoff in
20 1964, 18 years later, that was the first large-scale
21 study of asbestos exposure from end-use products to
22 identify any sort of health risk; right?

23 A It was probably the first large study of end-users,
24 not miners or manufacturing workers.

25 Q Correct. Thank you. By the way, back to the
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1 Industrial Commission of the State of Wisconsin, if
2 Mr. Bushmaker's employer, Consolidated Papers, allowed
3 him to work in a circumstance where snow was falling off
4 these pipes, that would have been a violation of the TLV
5 adopted by the State of Wisconsin, wouldn't it?

6 A I'm not a lawyer. I'm not an inspector.

7 Q Oh.

8 A I don't know what the violations of the rules would
9 be. It certainly was inappropriate.

10 Q It would -- okay. Very well. And you would find
11 fault with Mr. Bushmaker's employer to put him in a
12 position where he was exposed to asbestos in those
13 quantities in that fashion, correct, as a health
14 professional?

15 A As a health professional, yes. Finding fault in a
16 legal sense is a whole different issue.

17 Q Okay. I just want to know what your opinion is,
18 Doctor.

19 A Right.

20 Q Okay. I'm going back to the forest now, and the
21 forest I want to talk about relates to this issue of
22 cumulative exposures. As I understand your testimony,
23 it's your opinion that each and every exposure to
24 asbestos that Mr. Bushmaker may have had would have
25 contributed to the risk of him developing his lung

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1 cancer; correct?

2 A Well, I don't know what the statute is in this
3 state. There are some states in which my opinion of
4 each and every is not an allowable opinion because
5 judges have ruled that. I don't know what the rules are
6 here. What I will simply say, as I said to Mr. McCoy,
7 I'll be happy to say to you, Mr. Moore, is that the
8 cumulative exposure, the cumulative exposure is what
9 caused the disease and the exposure was accumulated from
10 all of the exposures they had. Some would have -- some
11 exposures would have contributed more and some exposures
12 would have contributed less.

13 Q And as you said, some courts have not even allowed
14 that testimony to come in; correct?

15 MR. MCCOY: Objection, Your Honor.

16 THE COURT: Right. Let's not go there.

17 MR. MOORE: Okay. Fair enough.

18 BY MR. MOORE:

19 Q Okay. Now Mr. McCoy asked you some hypothetical
20 questions and I want to ask you a couple as well. You
21 understand that Mr. Bushmaker was a pipefitter; correct?

22 A Yes. Is that a hypothetical or --

23 Q You understand that. Yes, it's -- assume with me
24 that Mr. Bushmaker was a pipefitter at Consoweld Papers
25 for 30 plus years. Okay?

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1 A Okay.

2 Q And assume with me that Mr. Bushmaker, as a
3 pipefitter, worked with asbestos sheet gaskets and
4 asbestos packing. Can you assume that with me?

5 A Yes.

6 Q And I want you to assume that Mr. Bushmaker
7 testified and will testify in my belief that the
8 facility where he worked had 600 valves. Okay?

9 A I'll take your assumptions as a hypothetical.

10 Q Thank you. And further assume that Mr. Bushmaker
11 had to replace the asbestos rope packing in those 600
12 valves once each year.

13 A Okay.

14 Q And further assume that in order to do this work,
15 he used about two-and-a-half feet of braided asbestos
16 packing made by the A.W. Chesterton Company. Okay?

17 A Yes.

18 Q Now based on what your general opinion is, would it
19 be your opinion -- oh, excuse me. And also further
20 assume, Dr. Frank, that he did this for a period of 30
21 years.

22 A Okay.

23 Q It would be your opinion, I assume then, that
24 assuming those facts to be true, that this work would
25 have resulted in an asbestos exposure to Mr. Bushmaker;

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1 correct?

2 A Your assumption is correct. Would have contributed
3 to his overall exposure. Of course.

4 Q And would have been a cause of his lung cancer;
5 correct?

6 A Yes.

7 Q Assume with me that Mr. Bushmaker also used Garlock
8 asbestos --

9 A In gaskets.

10 Q -- gaskets.

11 A They too would have contributed to his disease.

12 Q I haven't asked that question. Okay. Any product
13 I ask you about --

14 A You'll get the same answer.

15 Q Fair enough.

16 A If it contained asbestos and he was exposed, it
17 contributed to his disease. Some more, some less.

18 Q And you would agree if you don't know if a product
19 contained asbestos or not, you can't attribute fault to
20 that; correct?

21 A If I don't know or --

22 Q I'm sorry. If we don't -- if the jury doesn't
23 know.

24 THE COURT: No, no, no. Fault is the word I'm
25 troubled about. Cause. Okay?

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1 MR. MOORE: Fair enough, Your Honor. I will
2 rephrase.

3 THE COURT: Please rephrase the question.

4 MR. MOORE: I will. Thank you, Judge. I
5 appreciate that.

6 BY MR. MOORE:

7 Q If it's -- if it's unable to be determined if a
8 product contained asbestos or not, you cannot provide
9 expert testimony that it was a cause of Mr. Bushmaker's
10 lung cancer; correct?

11 A Without knowing or without there being proof to the
12 jury that a specific product contained asbestos, I can't
13 say it contributed to his disease.

14 Q Now as I understand your testimony, and I'll say it
15 again, that every asbestos exposure that Mr. Bushmaker
16 encountered contributed to the risk of his developing
17 disease; correct?

18 A All of his exposures contributed to his overall
19 exposure.

20 Q Okay.

21 A Cumulative exposure.

22 Q But you, you, Dr. Frank, cannot tell us what
23 particular exposure actually caused his disease;
24 correct?

25 A Well, I can tell you with the asbestosis, all of
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1 them caused the disease because all of them contributed
2 to his lung cancer. I can't tell you which fiber from
3 which product did it. If he had a left-sided lung
4 cancer and one of the fibers went to the right lung, it
5 certainly didn't cause a cancer in his left lung. So of
6 all of his exposures to whatever company's products,
7 it's impossible to say which product did it. You have
8 to say they all had the potential to do so and they all
9 contributed to the total exposure. Some would have
10 gotten into his lung, but obviously not every fiber from
11 every day no more than every cigarette over a smoking
12 lifetime or every molecule of benzene from filling up
13 gas tanks giving people leukemia is the one that caused
14 it. You don't know which one did it.

15 Q Okay. Thank you, Doctor. Circling back around,
16 showing you what's been marked as Exhibit 2705. Okay?

17 A Yes.

18 Q And this is plaintiff Gerald Bushmaker's response
19 to bankruptcy trust discovery served by Georgia-Pacific
20 on 11-15-11. Do you see that? Can you read that?

21 A I can.

22 Q Can the folks of the jury see that? Okay. I'll
23 represent to you that this is a document that the
24 plaintiff provided to the defendants during the course
25 of discovery in this case.

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1 A Which means he may have had some other exposures,
2 all of which would have been contributory.

3 Q Okay. Well, that's the question I was going to ask
4 you. Here at the back of this document is a list of all
5 the companies.

6 MR. MCCOY: Your Honor, can I be heard on this
7 for a moment?

8 THE COURT: Sure. Do you want to go side bar?

9 MR. MCCOY: Yes.

10 THE COURT: We can do that.

11 (Discussion at side bar at 12:00 p.m.)

12 MR. MOORE: We just --

13 THE COURT: Wait. We've got to get him here
14 too.

15 MR. MCCOY: Yes, Judge.

16 THE COURT: Okay. Your objection is?

17 MR. MCCOY: My objection is to this part of the
18 chart.

19 THE COURT: Oh.

20 MR. MCCOY: I think it's fine --

21 THE COURT: Can you fold it? It's fair. Just
22 fold it in half.

23 MR. MOORE: Sure.

24 THE COURT: Is that your concern?

25 MR. MOORE: Thanks, Judge.
ARTHUR FRANK - CROSS

1 MR. MCCOY: Yeah. The other question I had was
2 he just brings up the word bankruptcy trust with no
3 explanation of this process. I --

4 MR. MOORE: Well, it is what it is. I'll lay
5 the foundation.

6 THE COURT: Well, I'm not sure how this is
7 going to come in with Mr. Bushmaker's testimony, but I
8 sort of predicted that it will be asked of him as well.

9 MR. MCCOY: As long as we go with that.

10 MR. MOORE: Okay. That's not a problem.

11 THE COURT: Okay. Fair enough.

12 (End of side bar discussion at 12:01 p.m.)

13 BY MR. MOORE:

14 Q I think the jury saw most of this list in opening
15 statement. It was probably even on smaller type than
16 this. So I'll just go down the list. But I want you to
17 assume, Dr. Frank, that Mr. Bushmaker testified that in
18 his belief that he was exposed to asbestos from all of
19 these companies. Okay?

20 A Yes. And to the extent that he was exposed, they
21 would have been contributory, just like any other
22 exposure he had.

23 Q Okay.

24 MR. MOORE: Your Honor, I am loathe to run up
25 against the lunch hour to the jurors.

ARTHUR FRANK - CROSS

1 THE COURT: Sure. Let's go side bar just to
2 talk about calendaring because I know we've got a full
3 afternoon with some other stuff, but also want to make
4 sure we get Dr. Frank out of here in a timely fashion.
5 So let's just talk about how much is left. You know, I
6 don't even need to turn on the white noise for that. So
7 if you guys want to stand up and stretch, but it sounds
8 like we might be breaking soon. Let's find out. And
9 this does not have to be on the record.

10 (Discussion off the record 12:03-12:04 p.m.)

11 THE COURT: Actually Ladies and Gentlemen,
12 you're still on break because they're consulting about
13 whether they want to ask any more questions or not. But
14 you don't get to vote on that.

15 (Pause)

16 MR. MOORE: Your Honor, I'm just going to check
17 my notes right now.

18 THE COURT: That's fine. You're entitled. And
19 just give me the thumbs up or thumbs down and then we'll
20 go to Mr. McCoy.

21 MR. MOORE: Do I need to offer the exhibits
22 that were identified?

23 THE COURT: No. You've made your record. We
24 can clean that up later while the jury is not waiting.

25 MR. MOORE: Thank you. Just a couple of
ARTHUR FRANK - CROSS

1 questions.

2 BY MR. MOORE:

3 Q I think we asked this about the Chesterton product,
4 but I didn't ask --

5 THE COURT: Fold it.

6 MR. MOORE: I'm sorry, Your Honor.

7 Q -- about these companies here. Assume with me,
8 Dr. Frank, that all these products were present and used
9 in the Consoweld facility owned by Consolidated Papers
10 where Mr. Bushmaker worked. Would you agree that
11 Consoweld should have taken steps to prevent
12 Mr. Bushmaker from being exposed to all of these
13 products --

14 MR. MCCOY: Objection, Your Honor.

15 Q -- as a safety -- as an occupational and safety
16 doctor?

17 MR. MCCOY: Outside the scope of the testimony
18 and expertise.

19 THE COURT: Let's go side bar real quick, and I
20 apologize, Ladies and Gentlemen, but let's clean this
21 up.

22 (Discussion at side bar at 12:05 p.m.)

23 THE COURT: Okay. I'm going to sustain the
24 objection as cumulative. You've already asked him if
25 they had an obligation. Now you're just taking him

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1 through the whole list. So we don't need that.

2 MR. MOORE: Okay.

3 THE COURT: If that's all you've got, you're
4 done. If you've got anything else, let's get there.

5 MR. MOORE: Okay. It was my last question,
6 so...

7 THE COURT: Are you done?

8 MR. MOORE: I'm done.

9 THE COURT: Okay. Then we'll turn it over for
10 redirect.

11 (End of side bar discussion at 12:05 p.m.)

12 MR. MOORE: That concludes my
13 cross-examination.

14 THE COURT: It doesn't count until the white
15 noise is off. All right.

16 MR. MOORE: That concludes my cross-examination
17 of Dr. Frank.

18 THE COURT: All right. Mr. McCoy, any
19 redirect, please.

20 MR. MCCOY: Yes, Judge.

21 REDIRECT EXAMINATION

22 BY MR. MCCOY:

23 Q Dr. Frank, does it make any difference in terms of
24 your opinions about what caused Mr. Bushmaker's lung
25 cancer, meaning asbestos exposure versus smoking, if you

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1 believe what's in the medical records of the treaters
2 versus what Mr. Bushmaker had told you?

3 A If you mean do I still believe that asbestos had a
4 role in his lung cancer?

5 Q Yes.

6 A Of course it does. Even if the smoking would have
7 had a role, that doesn't diminish the fact that asbestos
8 contributed as well.

9 Q And is it still your testimony as far as the role
10 that smoking would have played, does that change?

11 A No. I mean that's -- my understanding is my
12 understanding. But it's not my understanding that will
13 count. There's no question in my mind that the asbestos
14 did it. You know, as my report said, you know, it's
15 unclear what role, if any, the tobacco had, but there's
16 no question that the asbestos had a clear and
17 significant role in his developing his lung cancer, and
18 certainly his asbestosis, which doesn't get caused by
19 smoking.

20 Q The -- you were shown some medical records that
21 talked about emphysematous changes --

22 A Yes, sir.

23 Q -- in Mr. Bushmaker. What is your opinion as to
24 the cause of those changes?

25 MR. MOORE: Objection. Outside the scope.
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1 Outside the scope of his report.

2 MR. MCCOY: The door was opened on that, Judge.

3 THE COURT: We've got to go back to side bar.

4 (Discussion at side bar at 12:08 p.m.)

5 THE COURT: Now refresh my recollection. Let's
6 back up a little bit. We were at side bar during the
7 direct exam and I said that if it wasn't in the report,
8 you couldn't go there. And then what I directed you to
9 do over your objection was have him read aloud the
10 report, which really did not talk about that.

11 Now what on the cross-exam reopened that door?

12 MR. MCCOY: They showed him the documents about
13 the emphysematous changes and asked him about it. They
14 opened the door.

15 MR. MOORE: No --

16 THE COURT: No, wait.

17 MR. MOORE: -- I didn't say that word.

18 THE COURT: No, I'm not recalling that.

19 MR. MCCOY: Judge, once again they have not
20 designated a medical expert on these changes. If
21 they're going to put it in front of Dr. Frank and imply
22 to Dr. Frank that he should --

23 MR. MOORE: I said --

24 THE COURT: No. Wait, wait, wait. We can't
25 both talk at once and I get to talk over you. Again,
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1 you keep talking about emphysematic changes, but I don't
2 recall that coming up during the cross-exam.

3 MR. MOORE: Intentionally so.

4 MR. MCCOY: It was shown to --

5 THE COURT: When you say "it" was shown, what
6 was "it"? Find me the document that was shown. And if
7 you're right, I'll give it to you. But --

8 MR. MCCOY: Here are my notes. 2723A.

9 THE COURT: Let's get it. Let's get it.

10 (Pause)

11 THE COURT: Okay. Well, no. Show me what
12 you're thinking.

13 MR. MCCOY: Right here.

14 THE COURT: Okay. Well, you did highlight it.

15 MR. MOORE: I did highlight it. I never said
16 the word. But that's fine.

17 THE COURT: Well, no. That's what I was
18 looking for. Yes, you may go there.

19 MR. MCCOY: And the other one, Judge, the other
20 one, the same thing, was the COPD. That was also --

21 THE COURT: That definitely came up. He
22 asked --

23 MR. MCCOY: Right.

24 THE COURT: You're clean. Okay.

25 MR. MOORE: Absolutely. Yeah, I agree.

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1 (End of side bar discussion at 12:10 p.m.)

2 THE COURT: Believe it or not these are very
3 productive for the lawyers. So Mr. McCoy, you may
4 continue.

5 BY MR. MCCOY:

6 Q Yes. Dr. Frank, you were shown some documents that
7 had highlighted a finding of centrilobular emphysematous
8 changes in Mr. Bushmaker.

9 A Yes, sir.

10 Q Do you recall that?

11 A I do.

12 Q And what is your opinion as far as Mr. Bushmaker's
13 concerned about the cause of that finding?

14 MR. MOORE: Objection. Lack of foundation.
15 There's been no study that he actually looked at any of
16 the films to form a basis for this opinion.

17 THE COURT: I'll allow the question, the
18 answer, and if you want to recross on the foundation,
19 you may do so. But the question is fair.

20 THE WITNESS: I saw in the records where it
21 said that they thought Mr. Bushmaker had emphysematous
22 changes. There are at least three possibilities of what
23 could have caused those emphysematous changes.

24 Depending on the smoking history, the smoking history I
25 have, I don't think there was enough smoking to cause

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1 those changes.

2 Secondly, emphysematous changes can occurred in the
3 lung following removal of part of the lung because the
4 other parts of the lung expand to compensate.

5 Thirdly, part of the work of a pipefitter is to do
6 welding. Welding fumes and the act of welding can also
7 cause emphysematous changes. So we have three
8 possibilities. We know that he was doing welding as a
9 pipefitter. We know that he had lung surgery. It is
10 unclear what the smoking history is. That may or may
11 not have been a contributing factor.

12 BY MR. MCCOY:

13 Q You also were shown a document that showed a
14 finding of COPD --

15 A Yes.

16 Q -- in Mr. Bushmaker and I think you described
17 before what COPD is. But can you briefly remind us what
18 that means?

19 A It's a generic term meaning Chronic Obstructive
20 Pulmonary Disease. The centrilobular emphysema we
21 just -- which could be equated with COPD, could have
22 come from the three causes we just mentioned. The other
23 data that we have about his COPD, which was not terribly
24 severe if you look at his pulmonary function testing, he
25 had a test of 74 percent prior to his lung surgery. 80

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1 percent is considered normal. 74 in a gentleman of his
2 age is a modest decrease. Certainly nothing that would
3 go under the heading severe. And if it would have been
4 thought to be severe with a part of his lung out, you
5 would expect, for example, that he might require
6 supplemental oxygen, which he doesn't. So I don't
7 think -- and that's why I disagreed with Mr. Moore that
8 I didn't think the COPD was severe and that's my
9 assessment of the data that's in the medical records.

10 Q What about the cause of the COPD? Do you have any
11 assessment on that?

12 A We just discussed -- you know, COPD, he doesn't
13 have evidence of chronic bronchitis. He had episodes of
14 acute bronchitis, which anybody can get if they get
15 inflammation of the respiratory tract. So we have to
16 assume that somebody thought his emphysematous changes
17 was, to their mind, equivalent of COPD. There's no
18 other plausible explanation. And the cause of his
19 emphysema could be cigarettes; undoubtedly was
20 contributed to by his welding fumes, and then there was
21 the role of having part of his lung removed.

22 Q What kind of role would having part of his lung
23 removed --

24 A As we said, when you take -- there are certain
25 tissues in the body, when you take them out or you take

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1 part of them out, the rest of it tries to compensate for
2 it. For example, if you take out one kidney, the other
3 kidney gets larger to compensate for it. Some organs
4 like the liver, if you take a part of the liver out, it
5 can regenerate the rest of the liver. If you take out a
6 piece of lung, the remaining lung on that side will show
7 certain changes.

8 The other thing that was of interest is if you look
9 at the pathology report when they have --

10 MR. MOORE: Objection, Your Honor. There's no
11 question pending. It's outside the scope of the --

12 THE COURT: Well, actually I think he's giving
13 a narrative answer to a question, so it's fair.

14 THE WITNESS: When you look at the pathology
15 report when he had his lung cancer surgery when they had
16 a whole lobe of his lung, nowhere in the pathologic
17 assessment, when they actually had the lung tissue to
18 look at, did anybody in that pathology report ever
19 mention emphysematous changes. So there's a real
20 question if it was there or not.

21 BY MR. MCCOY:

22 Q You talked about -- you were asked some questions
23 about exposure, and I think one of the points you said
24 was that there has to be proof that the product
25 contained asbestos --

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1 A Yes.

2 Q -- for you to have an exposure.

3 A For me to say that it contributed to his disease,
4 he had to have worked with a product that contained
5 asbestos that he was exposed to; fibers that were
6 released from it.

7 Q Does it also require that the fibers from that
8 product be released into the air?

9 A Yes.

10 Q And that they get into the area where they can be
11 inhaled?

12 A Yes.

13 Q So without those actual -- without that actual
14 evidence of asbestos content, fibers released in the
15 air, in the breathing zone to be inhaled, there would
16 not be an exposure from --

17 A Correct.

18 Q -- a causation standpoint.

19 A Correct. You could come visit my office, I have a
20 piece of asbestos-containing rock. It's taped up in a
21 plexiglass box. The physical presence of it in my
22 office doesn't put me -- and I sit in my office pretty
23 much every day -- or anybody visiting me at risk. So
24 the mere presence of it, if somebody now opened that box
25 and released those fibers into the room, that puts us at

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1 risk.

2 So to say that it was a contributor to his disease,
3 there been to be knowledge he was actually exposed to
4 it.

5 Q Okay. And exposure includes all those elements.

6 A All of those things. It had to be there; it had to
7 be in the air; it had to be in his breathing zone; it
8 had to get into his lungs.

9 Q So if somebody comes in to you as an occupational
10 physician and says I was exposed to a toxin, do you take
11 -- would you take them at their word in terms of
12 assessing what they said, exposure? Or would you ask
13 them these questions about does that mean, you know,
14 that it had the toxin in it or determine that; that it
15 had the toxin in it and that they actually inhaled it?

16 MR. MOORE: Objection, Your Honor. Outside the
17 scope. Calls for speculation.

18 THE COURT: No, I'm going to sustain that one
19 for a different reason. It's a 403 confusion issue.

20 MR. MCCOY: Yeah. Right.

21 BY MR. MCCOY:

22 Q All right. I'm going to move on to this last
23 question I've got. You were shown a copy I think of
24 this article by Fleisher.

25 A Yes.

ARTHUR FRANK - REDIRECT

1 Q Okay. You saw parts of it on the video system.

2 A Yes.

3 Q But I just gave you a copy of the whole article.

4 You made some comment about that article that the people
5 were fired who had had 20 -- less than -- or as they
6 neared the 20-years exposure. What do you mean by that?

7 A Well, they were going to go to the shipyard -- it
8 was up in Boston -- to study the problem of asbestos in
9 shipyards, specifically in pipe coverers. Nobody is
10 quite clear how or why this happened, but most of the
11 people who had had the 20 years of exposure were let go
12 and were not there to be part of the study. Of the few
13 that were left, three of them did, in fact, have
14 disease. You know, this is a conclusion that not
15 everybody would reach.

16 If three people working 20 years or more had
17 asbestosis, I think it's a legitimate question to ask.
18 Does that mean that that's safe?

19 We also know that it takes relatively many years.
20 We talked about latency. So people with lesser
21 exposures wouldn't yet have had enough of the latency
22 period to demonstrate disease. So there were some
23 serious flaws with this. But even so, the finding that
24 they got, you know, could have been looked at many
25 different ways in saying that it is -- appears to be

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1 safe based upon three people developing asbestosis out
2 of very few that were 20 years or more seems
3 inappropriate.

4 And even though this was their conclusion, anybody
5 else reading this could have thought about it and said
6 you know, maybe this isn't exactly what I would think
7 about this problem because there's other information out
8 in the world of science that tells us it's dangerous.

9 Q And that article was published in what year?

10 A 1946.

11 Q And you mentioned something about an article in the
12 Journal of the American Medical Association in 1949?

13 A Right. In fact, it went on to talk about lung
14 cancer.

15 Q And how does the article in 1949 add to or differ
16 from the perspective of the 46 conclusions?

17 A It looks at the problem of asbestos differently.
18 It reaches different conclusions that the material is,
19 in fact, hazardous. And in '56, Stokinger says whatever
20 we do to protect people from asbestosis, there should be
21 -- and he -- you know, it's there -- 100 or 500 times
22 better control to prevent cancer. And that was
23 certainly known by 1956 with regard to asbestos.

24 MR. MCCOY: That's all the questions I have.

25 THE COURT: Did you want to redirect just on
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1 the foundation?

2 MR. MOORE: One question. Couple down this
3 path. (12:22 p.m.)

4 THE COURT: I'll give you three to four minutes
5 total.

6 RE CROSS-EXAMINATION

7 BY MR. MOORE:

8 Q Dr. Frank, did you watch the Green Bay Packers play
9 the Washington -- excuse me, the San Francisco Giants --
10 49ers rather?

11 A This year?

12 Q Yeah. Did you see the playoff game?

13 A No.

14 Q What could -- do you know what Green Bay could have
15 done to have won that game?

16 A Played better. Scored more touchdowns.

17 Q That's right. It's Monday morning after the game.
18 We can talk about what things happened in the past, but
19 that's -- in Fleisher-Drinker, that's what happened in
20 1946. That's what the U.S. Government found; right?

21 A And others on other articles earlier and later
22 found different conclusions.

23 Q Fair enough.

24 MR. MOORE: Briefly, Your Honor, we're going to
25 see a lot of these later on. But this is one of the
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1 affidavits that Mr. Bushmaker submitted.

2 MR. MCCOY: Your Honor, I think this is outside
3 the scope.

4 THE COURT: I think I know where Mr. McCoy is
5 going, but I think he needs to tell me at side bar. But
6 this counts as part of your three minutes.

7 MR. MOORE: Okay.

8 (Discussion at side bar at 12:22 p.m.)

9 THE COURT: I think I can predict, but you tell
10 me.

11 MR. MOORE: He's trying to undermine the
12 foundation for the admissibility of these exhibits
13 through him saying, you know, Mr. Bushmaker has to have
14 asbestos; it has to be all these things that he laid out
15 in his --

16 THE COURT: Right. So this is to --

17 MR. MOORE: Rebut that.

18 THE COURT: -- rebut the implication that a lot
19 of these products on the list Mr. Bushmaker never
20 actually was exposed to.

21 MR. MOORE: Precisely. And that's through the
22 document.

23 THE COURT: Okay. So I'll let you do it with
24 one document. I assume it's all going to come back in
25 with Mr. Bushmaker from both of you.

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1 MR. MOORE: Yes, absolutely.

2 THE COURT: Okay. Let's make it quick.

3 (End of side bar discussion at 12:24 p.m.)

4 BY MR. MOORE:

5 Q Real fast. Okay. This is -- sorry. This is an
6 affidavit marked Exhibit 2729A from Mr. Bushmaker. Do
7 you see the signature there?

8 THE COURT: Well, now you've got to turn it
9 sideways.

10 A Yes.

11 Q And it's sworn under oath. Do you see that? It
12 says "Upon first being duly sworn on oath, I depose and
13 state as follows..."

14 A I see that.

15 Q And it says "I regularly engaged in activities
16 and/or worked in close proximity to others engaged in
17 activities that caused the release of asbestos fibers in
18 the air. I breathed in this asbestos dust for the time
19 period I worked at the job sites listed below. And I
20 was exposed to Armstrong asbestos-containing products
21 for a period of at least six months. To my
22 recollection, I worked with or in close proximity to the
23 following Armstrong asbestos-containing products as
24 circled..." and there are several circled there. Do you
25 see that?

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1 A I do.

2 Q And I read this correctly for you; right?

3 A Yes.

4 Q And then on the second page -- I'm sorry, folks, if
5 you can -- I hope you can see this. "I altered,
6 repaired or otherwise worked with asbestos-containing
7 products such that I was exposed on a regular basis to
8 raw asbestos fibers." Did I read that correctly?

9 A You did.

10 Q And this is the type of proof that you need to
11 attribute -- to say that it was a contributing cause to
12 Mr. Bushmaker's lung cancer; correct?

13 A To the Armstrong products, yes.

14 Q Absolutely.

15 A Yes. Just as it would be for any other product,
16 including the Philip Carey products.

17 MR. MOORE: Fair enough.

18 THE COURT: Did you want to re-redirect on
19 that?

20 MR. MCCOY: Judge, I lost track of the re-re's,
21 so --

22 THE COURT: That's why I'm here. Are you done?

23 MR. MCCOY: I'm finished.

24 THE COURT: All right. Well, Doctor, so are
25 you. Thank you for your testimony. You're free to go
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1 about your business. Have a safe trip home.

2 THE WITNESS: Thank you, Your Honor.

3 (Witness excused at 12:25 p.m.)

4 THE COURT: You're free to go to lunch as well.

5 We'll -- I'll tell what. I'm feeling generous. 65

6 minutes. Come back at 1:30.

7 (Jury excused from courtroom at 12:25 p.m.)

8 THE COURT: Okay. Everyone be seated, please.

9 Doctor, you're free to go.

10 MR. MCCOY: Judge, before he goes, that's why I
11 got up here. If we're going to make a proffer on this
12 future medical, I can do it with him or I can just do it
13 by summarizing. Whichever way Your Honor wants.

14 THE COURT: Well, no, no. Wait. Wait. Wait.
15 Wait. We're on the record now. Wait. I need you guys
16 to focus. Mr. McCoy, I have no idea what you're talking
17 about. Future medicals had nothing to do with
18 Dr. Frank's testimony.

19 MR. MCCOY: Well, that's because Your Honor
20 made the ruling that we couldn't talk about it. That
21 was discussed at the beginning because -- that was the
22 beginning of this morning.

23 THE COURT: No. What I said was that -- what
24 my understanding of the dispute that was put in front of
25 the Court was that you guys were \$5,000 apart on

1 medicals. I don't recall anything about future
2 medicals.

3 MR. MCCOY: We discussed that this morning;
4 that Mr. Moore made the objection that his testimony
5 didn't refer to future medical care. And --

6 THE COURT: I'm not tracking at all. I don't
7 recall that.

8 MR. MOORE: No, no, no, Your Honor. Maybe I
9 can clarify. My objection -- Doctor, unless --

10 THE COURT: Well, I don't know, I think
11 Mr. McCoy paid his freight, so I think he better wait
12 until Mr. McCoy says it's okay. But as far as I'm
13 concerned, he's done. But Mr. McCoy, we're on your
14 dime. Clarify, please.

15 MR. MOORE: I --

16 THE COURT: No, I want him to clarify.

17 MR. MCCOY: What I was told this morning was
18 that future medical, because it wasn't specifically
19 mentioned in his report as that term future medical,
20 couldn't be allowed in Dr. Frank's testimony. I adhered
21 to that. That's why I mentioned when I stopped my
22 testimony that I would be making a proffer.

23 THE COURT: Okay. Well, I'm going to have to
24 go back and look at the transcript. Maybe I'm older and
25 more senile than even my wife gives me credit for, but I

1 do not recall at all the topic of future medicals coming
2 up.

3 Mr. Moore, your recollection on this?

4 MR. MOORE: My recollection was that I was
5 going to cut it off at saying that there was no
6 information in the report that indicated an increased
7 risk of cancer or anything that's going to happen to him
8 in the future as a result of this current condition.
9 That had nothing to do with medical expenses.

10 I just didn't want speculation about future, the
11 future -- what holds the future for Mr. Bushmaker, you
12 know, and the scare, possible scare that he might get of
13 cancer again. That's where I was trying to cut the line
14 off.

15 MR. MCCOY: That's what I was referring to
16 exactly; what he just talked to when I said future
17 medical meaning --

18 MR. MOORE: They're apples and oranges
19 obviously.

20 THE COURT: Okay. I'm sorry. I misunderstood.
21 I thought you were talking about future medical
22 expenses. You're just talking about the probability of
23 future recurrence?

24 MR. MCCOY: Yes, right.

25 THE COURT: I don't recall that coming up, and

1 I apologize if we brought it up this morning. I thought
2 we were talking about --

3 MR. MOORE: Maybe I --

4 THE COURT: Go ahead.

5 MR. MCCOY: It was brought up.

6 THE COURT: On the record?

7 MR. MOORE: It might have been between
8 Mr. McCoy and myself and I just said Bob, I'm going to
9 keep you to the four corners.

10 MR. MCCOY: It was with Your Honor, because
11 there's where I heard Your Honor say where is it in his
12 report and I said I could --

13 MR. MOORE: You said that a lot.

14 THE COURT: Yeah. I'm sorry. That doesn't
15 help much today.

16 MR. MCCOY: I mean if they can come in --

17 THE COURT: Don't you have the surgeon coming
18 in? I mean why -- again, it's fair game for somebody to
19 offer to a reasonable degree of medical certainty that
20 something is likely to happen in the future if it's part
21 of the report. But again, this goes back to something
22 that we've talked about with all of our experts and it's
23 not new to this case. If it's in the report, it's fair
24 game. If it's something new and substantive, it's not.
25 You know, to the extent that you don't have in

1 Dr. Frank's report any prediction to a reasonable degree
2 of medical certainty that the cancer will recur or that
3 something else will recur, yeah, I would stand by that
4 ruling, although I don't remember making it. If you
5 wanted to proffer something in that regard, I'll let you
6 do it.

7 MR. MCCOY: Okay.

8 THE COURT: But the report speaks for itself.
9 I certainly don't want to prevent you from making your
10 record in that regard. But I'm not sure we need
11 Dr. Frank to do that.

12 MR. MCCOY: Okay. If I can just do a proffer,
13 then I will without him. I will do that.

14 THE COURT: That's fine. And frankly, I don't
15 know that Mr. Moore objects to anything that's actually
16 in the report.

17 MR. MOORE: No. No. It's his report. I mean
18 the report is what it is. I'm just saying I don't want
19 the four -- you know, it's the four corners.

20 THE COURT: Tell me what's in the report that
21 you want the jury to hear. Just read it to me. Tell me
22 what page so Mr. Moore can read along.

23 MR. MCCOY: What I'm saying is that specific --
24 let me find the report again.

25 THE COURT: If you want to have a seat,

1 Dr. Frank.

2 THE WITNESS: If you don't mind, I'll stand.
3 I've been sitting.

4 MR. MCCOY: Okay. Dr. Frank's report talks
5 about him having developed two asbestos-related
6 conditions. It doesn't go on to say anything about that
7 it's his opinion that there will be a recurrence or
8 anything of these conditions.

9 THE COURT: Well --

10 MR. MCCOY: What I wanted to do was to
11 introduce though, based on these two conditions, the
12 medical knowledge of what happens with these two
13 conditions; to describe it. I wasn't going to ask him
14 to give any opinion on this, I was just going to ask him
15 to describe what happens that it does reoccur. It's not
16 cured.

17 THE COURT: No. Okay. Well, I wouldn't have
18 allowed that anyway.

19 MR. MCCOY: Okay. Then I'll do a proffer. Do
20 I need Dr. --

21 THE COURT: That's fair. Because again, if you
22 were to read to me now something that was in his report,
23 I would have allowed that. But what you're telling me
24 now is that you were going to ask Dr. Frank to talk
25 generally about what can happen when people have these

1 conditions. If that was not in his report, then it
2 would not be fair game under 26(b)(2) or 26(e).

3 But again, I'm not entirely clear as to which it
4 is. And Mr. Moore, maybe you can help me. Is this news
5 to you? Is this something that --

6 MR. MOORE: My mind is coming back to me a
7 little bit. I had the same affliction. I believe they
8 were going down this path during direct testimony. We
9 came to side bar. It was the subject of an objection.
10 The Court ruled just as you are ruling right now. That
11 was my recollection.

12 THE COURT: If it's in the report, it's in.

13 MR. MOORE: Precisely. And we got to the issue
14 of progression. What's in the future for Mr. Bushmaker.
15 That was the gist of it.

16 THE COURT: Okay. So it was at side bar. I
17 thought, Mr. McCoy, you were talking about before we
18 even started this morning.

19 MR. MCCOY: Right. I am.

20 THE COURT: So this morning when we talked
21 about the medicals, that was about the financials. But
22 now I understand. Okay.

23 MR. MOORE: Yes.

24 MR. MCCOY: I am talking about what happened
25 early this morning because Dr. Frank can tell you --

1 THE COURT: Well, no, now I'm tracking.

2 MR. MCCOY: But I told Dr. Frank he can't talk
3 about that part of it before he even started testifying.

4 MR. MOORE: I --

5 THE COURT: Now you've lost me again. I've got
6 back off the rails. The ruling stands. Okay? If you
7 want to make a proffer, you can. But I don't want
8 Dr. Frank to have to wait for that.

9 MR. MOORE: I'm satisfied with the proffer made
10 by counsel to Lynette. That's fine.

11 THE COURT: If he wants to perfect his record,
12 I won't prevent Mr. McCoy from doing that.

13 MR. MCCOY: I'll do that without Dr. Frank.

14 THE COURT: Well, he's not getting back on the
15 stand anyway. I mean that's the ruling. I'm saying
16 Dr. Frank is free to go. But after lunch, you're free
17 to make your proffer to the Court to perfect your
18 record. Okay? Does that make sense?

19 All right. Doctor, now you're really free to go.

20 THE WITNESS: Thank you, sir.

21 THE COURT: Thank you. And you can still have
22 a safe trip home, please.

23 THE WITNESS: Thank you.

24 MR. MOORE: Safe travel, Dr. Frank.

25 THE COURT: All right, Counsel. This doesn't

1 have to be on the record, but let's talk about this
2 afternoon.

3 (Discussion off the record at 12:33-12:36 p.m.)

4 (Noon recess 12:36-1:30 p.m.)

5 (End of requested excerpt)

6

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9 I, LYNETTE SWENSON, Certified Realtime and Merit
10 Reporter in and for the State of Wisconsin, certify that
11 the foregoing is a true and accurate record of the
12 proceedings held on the 7th day of March 2013 before the
13 Honorable Stephen L. Crocker, Magistrate Judge for the
14 Western District of Wisconsin, in my presence and
15 reduced to writing in accordance with my stenographic
16 notes made at said time and place.
17 Dated this 27th day of March 2013.

14

15

16 /s/_____

17 Lynette Swenson, CRR, RMR, CBC
18 Federal Court Reporter

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